

1903

Quiz on the Practice of Osteopathy: A Compendium of Ready Reference for the Busy Practitioner and Advanced Student

Earl Herbert Laughlin

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Q U I Z
ON THE
PRACTICE OF OSTEOPATHY

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ERRATA.

Page 17, for "ascistes" read "ascites."

Page 17, question 3, for "ascitis" read "ascites."

Page 27, answer to question 18, for "favorable" read "unfavorable."

Page 33, line 8, for "cerum" read "cecum."

Page 33, line 9, for "vacum" read "vacuum."

Page 41, question 11, for "he" read "the."

Page 47, question 9, for "mommon" read "common."

Page 57, last line, for "grove" read "groove."

Page 59, line 22, for "its" read "the."

Page 75, question 14, for "impaction" read "impactions."

Page 96, question 4, for "which is" read "which sex is."

Page 105, question 12, for "palpitation" read "palpation."

Dr. J. J. O. Holden
QUIZ

—ON THE—

Practice of Osteopathy

*A Compendium of Ready Reference for the Busy
Practitioner and Advanced Student.*

—BY—

EARL HERBERT LAUGHLIN

Kirksville, Missouri

FROM THE PRESS OF
JOURNAL PRINTING COMPANY,
1903.

WB 940
L 374Q
1903

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1903~~

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INTRODUCTION.

THIS book is not intended to take the place of the large and more complete works, but to be used as an aid by the student and practitioner. In this little book the results of the time and labor of studious research are brought together in a condensed and systematic manner. A few diseases not frequently met with have been omitted. This book as a text-book will be used by two classes of readers, one consisting of those who simply consult it for reference in connection with their cases, the other composed of students who desire to ground themselves systematically in a knowledge of the practice of Osteopathy. In preparing this book many authorities have been consulted.

*To know just what to do in a moment's
time has saved many a life and given
to the practitioner fame and the en-
larged confidence of patrons. : : :*

Quiz on the Practice of Osteopathy.

ANEMIA.

1 What is anemia?

A pathological condition, characterized either by a diminution in the quantity of blood or by a deficiency in one or more of its constituents.

2 What are the forms of anemia?

(1) Primary or essential (simple, chlorotic, and pernicious); (2) Secondary (symptomatic); (3) Leukocytosis; (4) Leukocythemia, (splenic, myelogenic and lymphatic).

3 Give the symptoms of simple or benign anemia.

There is some pallor, often with languor, slight palpitation, dyspnoea, headache, and a tendency to fatigue. Examination of the blood shows a slight reduction in the number of the red cells and of the hæmoglobin (relative). This degree of anemia persists without aggravation or amelioration. It occurs most often in adult life. The patient may enjoy an active life for many years.

4 What is chlorosis?

A form of primary anemia, generally occurring in females at the age of puberty, characterized by the relative decrease of hæmoglobin.

5 Give the symptoms of chlorosis.

The disease comes on very gradually, with the usual symptoms of anemia. The skin becomes yellowish or greenish; the face is swollen; and the mucous membranes are pale. Palpitation of the heart and dyspnoea on slight exertion are much complained of; dry cough and headache are common symptoms. Usually there are some menstrual irregularities or uterine trouble. The patient is melancholy, nervous, and irritable. The blood is paler than normal; and there is diminution of hæmoglobin, and red corpuscles in the blood.

6 What is progressive pernicious anemia?

A form of primary anemia, characterized by a great destruction of red corpuscles, and a persistent tendency from a bad to a worse condition.

7 What is the pathological condition in progressive pernicious anemia?

The blood is pale and scant, with very little tendency toward coagulation. The red corpuscles change in shape and size; some

are small and others are large and possibly nucleated. The number of white corpuscles show no change, while the red corpuscles are diminished, and the hæmoglobin is relatively increased. There are fatty changes in the organs throughout the body, and sometimes spots of ecchymosis.

8 Give the symptoms of progressive pernicious anemia.

The onset is insidious, the face gets pale, the white of the eyes becomes pearly, the general frame flabby rather than wasted, the pulse perhaps large, but remarkably soft and compressible, and occasionally with a slight jerk, especially under the slightest excitement. The heart is readily made to palpitate. The surface of the body presents a smooth and waxy appearance; the lips, gums, and tongue seem bloodless, the flabbiness of the body increases, the appetite fails, extreme languor and faintness supervene, breathlessness and palpitation are produced by the most trifling exertion or motion, sometimes slight œdema is perceived about the ankles. Anorexia, dyspepsia, nausea, vomiting, and diarrhoea become progressively worse, and are nearly always present. The specific gravity of urine is low.

9 Give the symptoms of secondary anemia.

General loss of strength and flesh; pallor of the face and mucosa, appetite fails, loss of nerve function, coolness of the skin, palpitation, full pulse and anemic murmurs. There are also headache, vertigo, and possibly fainting.

10 What is the pathological condition in secondary anemia?

The tissues throughout the body are bloodless, and in some cases, show signs of fatty degeneration. There is a deficiency in the blood of the red corpuscles and hæmoglobin. The blood is brighter in color, and more fluid than normal.

11 What is leucocythemia?

That form of anemia characterized by an excess of white corpuscles in the blood, and enlargement of the spleen and lymphatic glands, and certain changes in the bone marrow.

12 What is the pathological condition of leucocythemia?

The blood is pale, the number of white corpuscles are greatly increased. The specific gravity and coagulability of the blood are diminished. The spleen is enlarged and firm; the lymphatic glands are swollen, but soft; and in the myelogenic form there are certain changes in the bone-marrow.

13 What are the varieties of leucocythemia?

(1) Splenic leucæmia, when the spleen is greatly enlarged from hyperplasia. (2) Myelogenic leucæmia, when the medulla of the bones is involved. (3) Lymphatic leucæmia, when the lymphatic glands are enlarged from the hyperplasia.

14 Give symptoms of leucocythemia.

The symptoms at the onset are the same as those of anemia, plus the enlargement of the lymphatic glands or spleen, or tenderness of the bones, especially the sternum and ribs. The patient has a pale, waxy, appearance. But a microscopic examination of the blood will decide the diagnosis.

15 Give the treatment for anemia.

The patient must have pure air, nutritious food, and plenty of good sleep. Remove the lesion, give a general spinal treatment; the liver, kidneys, skin and bowels should be kept active; increase the heart action, tone the circulation, increase nutrition, raise the ribs and clavicles, stimulate the lung area, treat the spleen, give a thorough general spinal, muscular and abdominal treatment. Hygiene is an important factor. The treatment given in all forms of anemia is about the same varying in different cases according to the manifestations and needs of the case.

16 What is the prognosis?

As a rule it is fair, but in some forms it is unfavorable.

ANEURISM.

1 What is aneurism?

A circumscribed dilatation of an artery formed of one or more of its coats.

2 What are the forms of aneurism?

(1) Sacculated, (2) cylindrical, and (3) fusiform.

3 When is an aneurism termed axial?

When the complete circumference of the vessel dilates.

4 When is an aneurism termed peripheral?

When a single sac is confined to the side of an artery.

5 Where does miliary aneurism occur?

Along the course of of the cerebral vessels

6 What is a false aneurism?

One in which the coats are ruptured and the blood gets into the adjacent tissues.

7 What is a dissecting aneurism?

One which dissects between the layers of the vessel wall.

8 What is an arterio-venous aneurism?

An artificial communication between an artery and a vein.

9 What are the causes of aneurism?

Anatomical displacements, traumatism, arterio-sclerosis, stoppage of a vessel, syphilis, and sudden or great strain.

10 Aneurisms occur most frequently between what years?

Between the 20th and 50th years.

11 Which sex is most frequently affected?

Male.

12 What percent of aneurisms occur in the thoracic portion of the aorta?

Seventy-five percent.

13 Give the symptoms of an inter-thoracic aneurism.

Pain, dyspnea, sweating, deglutition, stridor, cough and hemorrhage.

14 To what is the dyspnea due?

To pressure upon the trachea, bronchi, and recurrent laryngeal nerve.

15 What is revealed upon inspection?

Visible pulsation. When the aneurism is in the ascending arch there may be bulging over the first and second right interspaces. The apex beat is usually downward and outward. When the aneurism is in the descending portion there may be bulging at the second and third left interspaces near the sternum.

16 Where is the visible pulsation most frequently observed?

At the right of the sternum, about even with the third rib.

17 What is revealed upon auscultation?

Usually murmurs. When murmurs are present they are usually heard with great intensity. A double murmur is often heard. When aortic regurgitation coexists with an aneurism near the aortic ring, a ringing second sound is often present.

18 What is the object of treatment?

To produce clotting of blood in the sac, decrease arterial tension, and to get the walls of the sac to contract.

19 Give the treatment.

Remove all anatomical displacements; raise the ribs and clavi-

cles. The patient must be handled with great care; inhibit the accelerators of the heart; keep the patient quiet and free from excitement; the patient should remain in the recumbent position most of the time. If the diaphragm is prolapsed it should have attention. The diet must be light and avoid stimulating drinks.

20 What is the prognosis?

Usually unfavorable.

ANGINA PECTORIS.

(Breast-Pang Stenocardia.)

1 What is angina pectoris?

A paroxysmal disease, characterized by violent pains in the precordial region, extending into the upper extremities.

2 What are the causes of angina pectoris?

Anatomical displacements, diseases of the heart, fatty heart, and diseases which offer resistance to the coronary circulation. Arterio-sclerosis, gout, rheumatism, syphilis, Bright's disease, over use of tobacco, etc., are predisposing causes.

3. What are the most common lesions?

Rib lesions over the heart.

4 What may lesions of the upper dorsal cause?

Irritation to the sensory nerves of the heart.

5 What are the sensory nerves of the heart?

First, second, and third dorsal.

6 What may the irritation of a lesion upon the heart result in?

Neurosis of the sensory branches of the vagus.

7 In which sex does it occur more frequently?

Male.

8 What are the symptoms?

The attack is sudden, with pain in the preicordium. The pain radiates down the arm. The symptoms usually come on at night, or following some bodily exertion. There is numbness of the fingers, the pulse is usually normal. In the height of aparoxyism the patient may die from syncope.

9 How long does an attack last?

From several seconds to a minute.

10 Give the treatment.

Remove the lesion, relax the tissues of precordial region, raise the ribs, inhibit the vagus, inhibit the spine down to the 6th dorsal. The patient's general health should be built up by a general course of treatment. The patient must keep as quiet as possible.

11 What is the prognosis?

For relief it is favorable, but for a cure it is unfavorable.

APPENDICITIS.

1 What is appendicitis?

An inflammation of the vermiform appendix.

2 To what is the inflammation due?

To a vaso-motor disturbance.

3 Is the cæcum also inflamed?

Yes.

4 What are the forms of appendicitis?

Acute, chronic and recurrent.

5 Which form is the most dangerous form?

The acute.

6 How many varieties of appendicitis are there?

Three.

7 What are they?

Ulcerative, interstitial and catarrhal.

8 What are the causes of appendicitis?

Specific spinal or rib lesion, and traumatism.

9 What harm do these lesions do?

They obstruct bowel action, limit its motion, interfere with its nerve and blood supply, causing a weakened condition.

10 What results from this weakened condition?

The impaction of fecal matter, and foreign bodies in the colon. The vigor to pass these onward is lacking and it causes the crowding of the material into the appendix, which is also in a weakened state.

11 What abnormal condition of the bowel is often associated with appendicitis?

Constipation.

12 In which is appendicitis most common, male or female?

Male.

13 It is most frequent between what years?

Between the fifteenth and thirtieth years.

14 What diseases does it often follow?

Typhoid fever, influenza, and tuberculosis.

15 By what is it often terminated?

By abscess or peritonitis.

16 What ways might the pus be discharged?

Through the abdominal wall, the bladder, vagina or bowel. It may also escape into the tissues of the thigh or lumbar region.

17 What seem to be the most important bony lesions?

The 11th and 12th ribs on the right side, also the dorsal and lumbar vertebræ.

18 What would you do if you found the lower ribs displaced?

Elevate them a little.

19 Why would you elevate them?

To remove irritation.

20 The sensory nerves to the intestines come from what region of the spine?

The ninth, tenth, eleventh and twelfth dorsal.

21 The vaso-motor supply comes from what region of the spine?

The eleventh and twelfth dorsal, first and second lumbar.

22 The appendix gets its blood supply from what artery?

The ileo-colic artery.

23 What is the nerve supply to the appendix?

The superior mesenteric plexus?

24 In what region is the vermiform appendix located?

The right iliac region.

25 How long should the appendix be when normal?

About three and one-half or four inches; but it varies from one inch to nine inches.

26 Why is it called appendix vermiformis?

Because it has a worm like appearance.

27 Between what years does it attain its greatest length?

Between the twentieth and twenty-fifth years.

28 What direction does the appendix take from the cæcum?

It passes upward behind the cæcum toward the spleen, but Turner and Russia find it hanging into the true pelvis in 51 out of 83 cases, so it may take any direction from the cæcum, but normally it passes toward the spleen.

29 What are the symptoms of appendicitis?

Sudden pain in the right iliac region, tenderness over McBurney's point, and around the cæcum. The pulse is rapid and the fever is from 100° to 104° F. The muscles are tense over the abdomen. Nausea, vomiting, and hiccoughs are some times present. The limbs are flexed upon the abdomen.

30 What other diseases are often diagnosed as appendicitis?

Inflammation of the fallopian tubes and ovary, renal colic, and acute inflammation of the gall bladder.

31 What treatment is required to remove the foreign bodies from the appendix?

Local treatment.

32 Give the local treatment for appendicitis.

First relax the tissues at and above the site of the inflammation. This often gives immediate relief. Free the circulation about the appendix. The treatment must be deep, slow and inhibitive, and given with great care.

33 What must be done in the intervals of treatment?

Apply the ice bag or use hot, moist applications at the seat of the inflammation.

34 What area of the spine would you treat to relieve the pain?

From the ninth to the twelfth dorsal.

35 What abnormal condition of the bowel must have immediate attention?

Constipation.

36 If the constipation is not soon relieved by treatment, what must you then do?

Give a rectal injection.

37 Why do you give a rectal injection?

To empty the bowels, relieve the pressure, and promote circulation.

38 What should a patient do when an attack is threatened?

Go to bed.

39 What kind of diet must be given?

A fluid diet.

40 What is the prognosis?

Very favorable for recovery in nearly all cases under osteopathic treatment. The experience with cases, even the most dangerous acute ones, has been very satisfactory.

ASCISTES.

(Dropsy of the Peritoneum.)

1 What is ascites?

A dropsical condition of the abdomen due to an accumulation of serous fluid in the peritoneal sac.

2 What is the specific gravity of this serous fluid?

1010 to 1014.

3 What are the causes of ascitis?

Anatomical displacements, pressure upon the branches of the portal vein within the liver, thrombosis of the portal vein, chronic heart disease, chronic lung disease, chronic malaria, chronic peritonitis, pressure upon the thoracic duct, pressure of a tumor or displaced viscus, dropsy, Bright's disease, syphilis, etc.

4 Where do you look for the most important lesions?

Along the splanchnic and lumbar regions, also look for rib lesions.

5 Give the symptoms of ascites.

When the sac contains one quart of fluid or over there is a sense of weight and fullness. As the amount becomes greater the symptoms become more pronounced. There may be a dragging pain in the loins, dyspnea, gastro-intestinal disturbances, and frequent micturitions.

6 What do you detect upon inspection?

The belly is prominent, skin tense, smooth and shining, the thorax appears small. The respirations are hurried and are of the thoracic type.

7 What do you detect upon percussion?

Dullness over all portions of the abdominal cavity occupied by the fluid. The dullness shifts as the patient changes his position.

8 Give the treatment for ascites.

Remove the lesions, treat the disease to which it is secondary, free the circulation. This is done by correcting spinal lesions and stimulating the splanchnic and lumbar vaso-motor areas. Also stimulate the solar and other abdominal plexuses. Manipulation is made from below upward along the course of the vena cava and azygos veins, the portal and the superficial abdominal veins. Stimulate the kidneys and bowels. Tapping is not necessary except in cases of atropic cirrhosis of the liver. Treatment must be given every day.

9 What is the prognosis?

It depends upon what produces the trouble. Generally speaking, the prognosis is very good, except in cases of atrophic cirrhosis of the liver.



ASTHMA.

(*Bronchial Asthma.*)

1 What is asthma?

A disease of the bronchial tubes, characterized mainly by paroxysmal dyspnea.

2 What is the cause of asthma?

Spinal and rib lesions.

3 What do these lesions do?

They disturb the nerve and blood supply to the bronchi. This often weakens them, and makes it possible for the various exciting causes to act.

4 What are the exciting causes?

(a) Pollen of vegetation, (b) inhalation of chemical vapors, (c) odors of animals, (d) dust, etc.

5 Where are lesions most often found?

In the cervical and upper dorsal regions, also the ribs.

6 What are the most common rib lesions?

The fourth and fifth on the right side.

7 What may lesions from the fourth to sixth dorsal cause?

An abnormal motor effect, both in arousing spasmodic conditions of the muscles of the bronchial walls, and in the vaso-motor activity that produces the hyperemia of the mucous membrane.

8 Asthma is secondary to what diseases?

Cardiac diseases, gout, emphysema, rheumatism, syphilis, and Bright's disease.

9 It occurs most frequent in males or females?

Males.

10 When does the paroxysm usually come on?

In the night during sleep, and at a definite time.

11 How are the air tubes narrowed?

By spasm of their muscular fibres, or by swelling of the mucous membrane from hypermia.

12 What are the symptoms?

Nervous headache, drowsiness and vertigo. The patient feels smothered, the face is pale, anxious, and soon covered with cold perspiration; the eye lids, finger tips, and lips are discolored; the pulse is feeble and rapid, and temperature subnormal.

13 What is revealed upon inspection?

An enlarged chest, usually barrel shaped, the respirations are diminished; the inspiration is short and gasping, and the expiration is greatly prolonged.

14 What is revealed upon percussion?

A hyper-resonance; in advanced cases with associated emphysema, semi-tympanitic resonance is very common.

15 What is revealed upon auscultation?

Wheezing expiration, sibilant and senorous rales.

16 How long does an attack last?

It may last a few minutes, or several hours.

17 Upon what do we make our diagnosis?

The history, physical signs, the microscopic examination of the sputum, etc.

18 What cranial nerve conveys motor fibres to the unstripped muscle fibres of the bronchi?

The pneumogastric.

19 What forms the anterior pulmonary plexus?

The vagus and sympathetic.

20 What forms the posterior pulmonary plexus?

The vagus and branches from the second, third and fourth dorsal sympathetic ganglia.

21 What does stimulation of the vagus in the neck produce?

Constriction of the pulmonary vessels.

22 What does stimulation of the sympathetics in the neck produce?

Dilatation of the pulmonary vessels.

23 How often treat asthma?

About once a week.

24 Give the treatment.

Relax the spinal tissues, raise the clavicals and ribs, remove the lesion between attacks, relax the diaphragm by inhibition of the phrenic nerve.

25 What is the prognosis?

It is very favorable.

BILIARY CALCULI.

(*Cholelithiasis; Gall Stones.*)

1 Give the definition for biliary calculi.

Concretions found in the gall bladder, due to a pathological change. They often set up characteristic disturbances.

2 What are the causes of biliary calculi?

Spinal lesions to the sympathetic nerves in charge of liver functions. Irregular meals, excessive diet of starches and fats, constipation, tight lacing, pregnancy, chronic obstruction to the flow of bile, tumors, etc.

3 Is biliary calculi more common in males or females?

Females.

4 To what per cent?

Seventy five per cent.

5 Give the symptoms of biliary calculi.

There may be no subjective symptoms, unless the passage of a calculus through the duct starts. This would give rise to hepatic colic, and then there would be agonizing pains in the right hypochondriac region, radiating to the back and to the right shoulder. Pains usually occur two hours after a meal. Cold sweats, feeble pulse, vomiting and jaundice follow obstruction. If the stone passes, you will find it in the stool.

6 Where are the stones formed?

In the gall bladder.

7 What is the nerve supply to the gall bladder?

Coeliac plexus.

8 What is the blood supply of the gall bladder?

The cystic artery from the right branch of the hepatic.

9 What is the shape of the gall bladder?

Pear shape.

10 How long is it?

About four inches.

11 How wide is it?

About one and one-half inches.

12 What is its capacity?

About one and one-half ounces.

13 Where does it empty?

Into the duodenum.

14 Where do you locate the fundus of the gall bladder?

At the tip of the ninth rib.

15 The gall bladder contains how many coats?

Three.

16 Name them.

Serous, fibrous and muscular, and mucous.

17 How many stones may there be in the gall bladder?

There may be one large one, or several thousand small ones.

18 What is the size of a gall stone?

They vary, from that of a grain of sand to that of a goose egg.

19 What is the color of a gall stone?

It varies from white or light yellow, to dark green.

20 Of what are gall stones composed?

Cholesterin, bile acids, bile pigments, lime, magnesia, etc.

21 What is the chief constituent of gall stones?

Cholesterin.

22 What favors cholelithiasis?

Tight lacing, bending forward at a desk, enteroptosis, or any thing that produces stagnation of the bile.

23 Differentiate between renal colic and biliary calculi.

In renal colic the pain radiates from the kidneys down the uterus to the pelvis, blood in the urine, no jaundice.

24 Differentiate between intestinal colic and biliary calculi.

In intestinal colic the pain radiates from the umbilicus; no jaundice.

25 Differentiate between gastralgia and biliary calculi.

In gastralgia the pain is referred to the stomach and back; no jaundice.

26 What is the object of treatment?

To remove the stone, and restore normal liver function.

27 To ease the pain where would you treat?

From the sixth to the tenth dorsal.

28 Why would you treat here?

Because the sensory fibres are derived from this area of the spine.

29 What must the patient do at the intervals of treatment?

Take a regular vegetable diet, and plenty of good exercise.

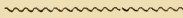
30 Give the treatment for biliary calculi.

Correct the lesion, treat along the spine from the sixth to the tenth dorsal, free the circulation, relax the tissues about the gall

duct, work about the liver, treat the kidneys, and spleen, give a thorough spinal treatment. To remove the stones, lay the patient on his back, legs flexed, and shoulders raised. Manipulation is then made over the site of the fundus of the gall bladder, and down along the course of the duct. This treatment is deep and firm. Keep this up until the stone is removed.

31 What is the prognosis?

Very good under osteopathic treatment.



BRONCHITIS.

(*Tracheo Bronchitis.*)

1 What is bronchitis?

A catarrhal inflammation of a part, or the whole of the mucous membrane of the bronchial tubes.

2 What are the forms?

Acute and chronic.

3 Why is it often called tracheo bronchitis?

Because the mucosa of the trachea is also involved to a greater or lesser extent.

4 What is the pathological condition of the mucous membrane of the bronchi and trachea in the acute form?

Swollen, reddened, and covered with mucous mingled with epithelial cells; later muco pus. The smaller bronchial tubes are dilated and mucous glands are swollen.

5 What is the pathological condition in the chronic form?

The epithelial layer is, in great part, missing, the mucous membrane is very thin, the longitudinal elastic fibres appear prominent. In every long standing case, the mucous glands and muscular coat undergo atrophy, and the bronchial tubes are dilated.

6 What are the causes of the acute form?

Anatomical displacements, extension of a catarrhal inflammation from the nares, pharynx and larynx. The immediate causes are mechanical, chemical, and biological irritants, which act directly upon the tracheo-bronchial mucosa.

7 What are the causes of the chronic form?

It may be primary or secondary. It is often caused by certain diathesis, as gout, syphilis, chronic alcoholism, pulmonary tuberculosis, rheumatism, etc. It may also result from repeated attacks of the acute form.

8 Upon what do we make a diagnosis?

The symptoms.

9 Give the symptoms of the acute form.

The onset is marked by chills, coryza, sore throat, and hoarseness; in children often convulsions. The temperature is about 101° to 103° F. When coughing there is a pain along the intercostal muscles and diaphragm, the cough is dry and hard at first, but soon becomes moist and attended with expectorations.

10 Give the symptoms of the chronic form.

They are similar to those of the acute form, but not so severe, there is soreness in the epigastrium if the cough be severe and frequent. The cough is not a constant accompaniment, but is paroxysmal and varies in severity and frequency. When the expectoration is tenacious and small in quantity, and when the smaller tubes are affected then the cough is most violent. The cough is often absent in the summer, but returns in the winter.

11 What is revealed upon inspection?

Enlarged thorax and decrease in expansile movements, due to the associated emphysema.

12 What is revealed upon percussion?

Usually a hyper-resonant note.

13 What do the lesions produce?

A vaso-motor disturbance of the blood vessels of the membrane.

14 Where do the lesions most often occur?

Along the vaso-motor innervation of the bronchi.

15 The sputum consists mainly of what?

Pus corpuscles with large cells, in which there is myelin droplets of virchow and carbon particles.

16 How often treat the acute form?

Once a day.

17 How often treat the chronic form?

About three times per week.

Give the treatment.

Relax the spinal, neck and thoracic tissues, remove the lesion, lower the first rib, but raise the rest, raise the clavicle, treat thorough from the second to the seventh dorsal, give the mustard plaster

treatment to the patient's breast, and inhibit the abdomen to draw the blood away from the bronchi. Keep the kidneys and bowels active.

10 What is the prognosis?

Good.

CHOLERA MORBUS.

(*Cholera Nostras; Sporadic Cholera.*)

1 What is cholera morbus?

An acute catarrhal inflammation of the stomach and bowels, characterized by vomiting and purging, colicky pains and muscular cramps.

2 What are the causes of cholera morbus?

Anatomical displacements, eating unripened fruits and cucumbers, exposure to cold and wet, sudden checking of perspiration, drinking impure water, bad hygienic surroundings.

3 Give the symptoms of cholera morbus.

The onset is usually sudden and violent; diarrhea, vomiting and purging; violent pains in the abdomen, and cramps of the limbs often occur; fever, feeble and rapid pulse, pale face; the vomit at first is the ordinary contents of the stomach but soon becomes green liquid; thirst; a cold perspiration breaks out all over the body; urine highly colored and patient feels weak.

4 What are the important lesions?

Lesions to the lower dorsal and lumbar regions.

5 How many lesions in the lower dorsal or lumbar region cause cholera morbus?

By interference with the nerve and blood supply to the bowel, thus weakening the bowel and making it more susceptible to the agencies usually described as the exciting causes.

6 When cholera morbus is present in children under two years old what is it called?

Cholera infantum.

6 What is the duration of cholera morbus?

It varies from one or two hours to 48 hours.

8 Give the treatment for cholera morbus.

See treatment for diarrhoea.

9 What is the prognosis?

Good under osteopathic treatment.

CHOREA.

(*St. Vitus' Dance.*)

1 What is chorea?

A disease which is characterized by irregular involuntary muscular contractions; usually there is a weakening of the mind.

2 What are the forms in regard to duration?

Acute and chronic.

3 What are the causes of chorea?

Anatomical displacements, endocarditis, strains, pregnancy, and parasites.

4 Where are the lesions most often found?

In the cervical and upper dorsal regions.

5 What may lesions high up in the spine involve?

The cord and brain.

6 How may a lesion high up in the spine interfere with the brain and cord?

By disturbing the nerve and blood supply.

7 The cilio-spinal center, vaso-motor to the face and mouth, pupillo-dilator fibres, motor fibres to involuntary muscles of the orbit, vaso-motors to the lungs, and accelerators to the heart all occur within what area of the spine?

From the first to the sixth dorsal.

8 Which sex is most frequently attacked?

Female.

9 Which race is most susceptible?

The white race.

10 Give the symptoms.

An attack may occur at any time except during sleep. There is usually restlessness, disturbed sleep, spasmodic muscular movements, (usually of the upper extremities), patient tires very easily, bad disposition, headache, weak memory, and usually becomes very anemic.

11 What is the course of chorea?

From one to four months.

12 Upon what do we base our diagnosis?

The symptoms.

13 What is the chronic form often called?

Huntingdon's chorea.

Give the treatment.

Relax all spinal structures, remove the lesions, have patient rest and not study or worry. Free the circulation to the brain, treat cervicle nerves, if the heart is fast slow it; keep the kidneys and bowels active; treat the muscle groups which are involved in the disease. The diet must be light and nutritious.

15 What is the prognosis?

Favorable under osteopathic treatment.

CIRRHOISIS OF THE LIVER.

(*Nutmeg Liver; Gin-drinker's Liver; Interstitial Hepatitis.*)

1 What is cirrhosis of the liver?

A chronic disease characterized pathologically by an excess of connective tissue in or about the liver.

2 What else is cirrhosis of the liver often called?

Nutmeg liver, gin-drinker's liver, hob nailed liver and interstitial hepatistis.

3 Name the three pathological varieties.

(a) Atrophic cirrhosis, (b) Hypertrophic cirrhosis, (c) Biliary cirrhosis.

4 Which is the most common form?

Atrophic cirrhosis.

5 What are the cases of atrophic cirrhosis?

Anatomical displacements, alcoholism, spicy foods, over eating, etc.

6 What is the cause of biliary cirrhosis?

Chronic obstruction of the bile duct.

7 Give the symptoms of atrophic cirrhosis.

The prodromal symptoms are a gradual loss of flesh, anorexia,

constipation, coated tongue, slight jaundice, dyspepsia, as the obstruction of the portal circulation becomes more marked, the mucosa of the gastro intestinal tract becomes more and more swollen and congested and gives rise to nausea, vomiting and hemorrhages from the stomach. The fever is about 100° to 103° F.

8 Give the symptoms of hypertrophic cirrhosis.

Intense jaundice, fever, spleen enlarged, urine contains bile pigments, and stools are slate colored.

9 Give the symptoms of biliary cirrhosis.

Jaundice more intense than in hypertrophic cirrhosis, intermittent hepatic fever, etc.

10 Where are the lesions most commonly found?

Along the splanchnic area and lower right ribs.

11 What diseases does cirrhosis of the liver follow?

Syphilis, gout, malaria, tuberculosis, etc.

12 Hypertrophic cirrhosis is most common in what climates?

Warm climates.

13 Which are the most frequent victims of hypertrophic cirrhosis, males or females?

Males.

14 To what proportion?

Six to one.

15 Explain how ascites may result from cirrhosis of the liver.

The contraction of connective tissue causes pressure upon the portal vein. The blood pressure being low in the veins, obstruction soon takes place, and ascites results.

16 How often should acute cases of cirrhosis of the liver be treated?

Every day.

17 Give the treatment for cirrhosis of the liver.

First gain vaso-motor control, by removal of lesion and stimulation of the splanchnic area of the spine. This will take down the inflammatory congestive process, which is allowing the increase of connective tissue. Attention must be given to the spleen, stomach and intestines, also give Dr. Harry Still's liver treatment. In the treatment for biliary cirrhosis you must remove the obstruction to the duct and empty the gall bladder.

18 What is the prognosis?

Usually ^{very} favorable, although various cases have been cured under osteopathic treatment.

CONGESTION OF THE KIDNEY.

1 What is congestion of the kidney?

A vaso-motor disturbance resulting in too much blood to the kidney.

2 What are the forms?

(a) Active hyperæmia.

(b) Passive hyperæmia.

3 What is active hyperæmia?

A condition in which there is too much arterial blood circulating through the kidney.

4 What is passive hyperæmia?

A condition in which there is retention of venous blood in the kidney.

5 What are the causes of the active form?

Anatomical displacements, exposure to cold when the body is over heated, eruptive fevers, poisons, (as the stimulating diuretics), pregnancy, etc.

6 What are the causes of the passive form?

Anatomical displacements, chronic heart, lung and liver diseases. Pressure of tumors on the renal veins, thrombosis of the renal veins (rarely), or any obstruction to the general circulation.

7 Give the symptoms of the active form.

Pain over the loins, the urine is dark, scanty, of high specific gravity; and may contain a trace of albumen, a few hyaline casts, and some free blood.

8 Give the symptoms of the passive form.

Sensation of weight over the loins. The urine is usually diminished, but rarely is increased in quantity, and contains free blood, a little albumen and rarely a few narrow hyaline casts.

9 What is the pathological condition of the kidney in the acute form?

Swollen, of a deep red color, and bleeds freely on section.

10 What is the pathological condition of the kidney in the passive form?

Swollen and of a bluish-red color, later it becomes hard from an over growth of connective tissue, and in the advance cases the renal epithelium is fatty.

11 Where are the lesions most often found?

Along the vaso-motor area of the spine.

12 Where is this vaso-motor area?

From the sixth dorsal to the second lumbar.

13 What might congestion of the kidney pass into?

Nephritis

14 What kind of diet is recommended?

A liquid diet in the acute form and a light diet in the chronic form.

12 How often should the patient be treated in the acute form?
Once every day.

16 How often should the patient be treated in the chronic form?
About four times per week.

17 What is the object of treatment?

To gain vaso-motor control.

18 Give the treatment for congestion of the kidney.

Relax spinal tissues. If any lesions are present, remove them. If it is secondary to some other disease, treat the disease to which it is secondary. But the main treatment must be directed to the primary disease. Keep the bowels and skin active. Keep patient quiet; inhibit the sensory nerves to the kidney. To aid circulation give a direct treatment over the kidneys. Give a deep inhibitive treatment to the abdomen to draw the blood from the kidneys. Stimulate the heart, lungs, and inhibit the superior cervical ganglion, to tone circulation and relieve blood tension. When stimulating the kidneys have the patient lie on his back, then slip the hands under his back in the region of the innervation of the kidneys. Apply treatment by pressing the fingers deeply into the spinal muscles.

19 What is the prognosis?

Good, but must be guarded in all cases.

CONGESTION OF THE LIVER.

1 What is congestion of the liver?

An excess of blood in the vessels of the liver.

2 What are the forms?

Active and passive.

3 To what is the active form due?

An excess of arterial blood circulating through the liver.

4 To what is the passive form due?

An engorgement of the liver, by retention of blood in the portal circulation.

5 What are the causes of the active form?

Anatomical displacements, over indulgence in alcohol, infectious fevers, etc.

6 What are the causes of the passive form?

Anatomical displacements, any disease which obstructs the venous circulation, such as chronic heart and lung diseases.

7 Give the symptoms of the active form.

Coated tongue, fetid breath, anorexia, pain and tenderness in the hypochondriac and epigastric regions, nausea, vomiting, sick headache, slight jaundice, enlarged liver and spleen.

8 Give the symptoms of the passive form.

They are about the same as those of the active form.

9 Where is the liver located?

In the right hypochondriac and epigastric regions.

10 What is the nerve supply to the liver?

The left pneumogastric and solar plexus.

11 What is the blood supply to the liver?

The portal vein and hepatic artery.

12 Where would you examine for the most important lesions?

From the sixth dorsal down, also the lower ribs on the right side.

13 What kind of a disturbance is congestion of the liver?

A vaso-motor disturbance.

14 Give the treatment for congestion of the liver.

First, try to gain vaso-motor control; stimulate the splanchnic area and solar plexus and hepatic plexus; give the direct liver treatment, also give a general spinal, neck and abdominal treatment to free circulation.

15 What is the prognosis?

Very good. These cases are usually readily cured by osteopathic treatment.

CONGESTION OF THE LUNG.

1 What is congestion of the lung?

An engorgement of the pulmonary vessels with blood.

2 What kind of disturbance is it?

A vaso-motor disturbance.

3 What are the forms?

Active hyperemia and passive hyperemia.

4 What are the causes of active hyperemia?

Anatomical displacements, increased circulation, violent exercise, inhalation of an irritating atmosphere and ingestion of a large amount of alcohol.

5 What are the causes of passive hyperemia?

Anatomical displacements, obstruction to the return of blood to the left heart, mitral regurgitation, dilated right ventricle and cerebral diseases.

6 Give the symptoms of acute hyperemia.

Cough, blood-streaked expectorations, and severe dyspnoea. Physical examination reveals dullness and crepitant rales.

7 Give the symptoms of passive hyperemia.

Dyspnoea and cough. The expectoration of frothy serum containing alveolar epithelial cells. The surface of the body becomes pale.

8 Give the treatment for congestion of the lung.

Relax the spinal structures, remove the lesion, raise the ribs, gain vaso-motor control, stimulate the accelerators of the heart, relieve the dyspnoea, use the knee treatment to expand the chest, stimulate the intercostal nerves to get an affect upon the pulmonary vessels, treat abdomen to call the blood from the lungs, stimulate the vaso-motors of the lungs. Usually a few treatments are all that is necessary.

9 Where is the vaso-motor area of the lungs?

From the 2nd to the 7th dorsal.

10 What is the duration of congestion of the lung?

It varies from five hours to three or four days.

11 What is the prognosis?

Very favorable.

CONSTIPATION.

1 What is constipation?

A fecal retention, difficulty, irregularity or insufficiency of the evacuations of the bowels, usually due to interference with the action of the nerves supplying the bowel with motion, secretion and circulation.

2 What are the causes of constipation?

Anatomical displacements, bad diet, pregnancy, laziness, adhesions, torpid liver, hernia, prolapsed uterus, foreign bodies, dyspepsia, irregular living, drugs, pressure of tumors, etc.

3 Give the symptoms of constipation.

Headache, feeling of fullness and pressure in the perineum and abdomen, malaise, palpitation, anorexia, bad dreams and fever. Palpation usually reveals hard masses of fecal matter at the cecum, hepatic, splenic and sigmoid flexures. Infrequent movement of the bowels is the characteristic symptom.

4 Where do the most important lesions occur?

In the lower three or four dorsal and in the lumbar regions.

5 What may a lesion to the fourth sacral nerve cause?

Contracture of the external sphincter.

6 Name some of the mechanical obstructions to the bowel.

Tumors, hernia, prolapsed uterus, adhesions, and presence of foreign bodies.

7 Byron Robinson says constipation is a neurosis of the fecal reservoir. What is the fecal reservoir?

That part of the large intestine which holds the fecal matter, consisting of the rectum, sigmoid flexure, descending colon and half of the transverse colon.

8 Name the coats of the large intestine.

Serous, muscular, areolar and mucous.

9 What is the blood supply of the large intestine?

It is derived from the branches of the superior and inferior mesenteric arteries, also some blood supply from the internal iliac at the rectum.

10 What is the nerve supply of the large intestine?

The mesenteric plexus, which is continuous with the lower part of the solar plexus. The branches follow the blood-vessels and

finally form the two plexuses, Auerback's, which lies between the muscular coats, and Meissner's, in the submucous coat.

11 Give the treatment for constipation.

Remove the lesion; give a general spinal treatment paying much attention to the lower dorsal and upper lumbar region; give a deep relaxing abdominal treatment; begin at the cecum and carry the treatment along the course of the bowel to the sigmoid flexure; raise the cecum, sigmoid and all abdominal organs up to fill the chest vacuum. Dr. Harry Still's liver treatment should be given; raise the ribs, treat the vagus in the neck, dilate the sphincter, and inhibit over the sacrum. If the coccyx is displaced correct it; a few rectal injections may be given; treat the muscles in the lumbar region; the diet must consist principally of fruit, cereals, and vegetables; avoid meats, white bread, pies, cakes and fats. The patient must not eat if he is not hungry, avoid stimulating drinks, have the patient to drink a glass of water about twenty minutes before each meal, regulate the diet; exercise is very important; patient should have a time for defecation; have the patient to drink eight or ten glasses of pure water during the day; often the removal of the lesion cures the case.

12 What is the prognosis?

Very good under osteopathic treatment.

13 Constipation is the cause of a large per cent. of disease (E. H. L.)

CORYZA.

1 What are the forms of coryza in regard to time?

Acute and chronic.

2 What is acute coryza?

An acute catarrhal inflammation of the Schneiderian membrane.

3 What is the Schneiderian membrane?

The mucous membrane of the nasal fossæ.

4 What is chronic coryza?

A chronic catarrhal inflammation of the mucous membrane of the nasal cavities, with excessive and persistent secretion of mucus. The sense of smell is often impaired.

5 What are the varieties of chronic coryza?

Hypertrophic and atrophic.

6 What are the causes of acute coryza?

Anatomical displacements, exposure to atmospheric changes and irritation to the nasal cavities.

7 What are the causes of chronic coryza?

Anatomical displacements, repeated attacks of acute coryza, foreign bodies in the nasal passages, syphilis, tuberculosis, and breathing irritating atmosphere.

8 Give the symptoms of acute coryza.

Chilliness, dull headache, sneezing, nose stops up so breathing takes place through the mouth. The discharge from the nose is first watery but soon becomes copious and muco-purulent.

9 Give the symptoms of hypertrophic nasal catarrh.

There is a watery nasal discharge, usually one or both nasal passages are stopped. The nose usually feels dry; there is usually a headache, and the hearing is generally impaired.

10 Give the symptoms of atrophic nasal catarrh.

Dryness of the nose, the nasal passage is somewhat obstructed, the sense of smell may be lacking. The main symptom is the disgusting odor.

11 What is the course of acute coryza?

About six days, but the nasal discharge usually persists for several days longer.

12 Where do the lesions usually occur in coryza?

In the upper cervical region. They may also occur in the lower cervical and upper dorsal regions.

13 How may exposure to cold produce coryza?

By contracting the cervical muscles. These contracted muscles draw the cervical vertebræ out of their normal relations; and as a result of abnormal relations of the vertebræ we have obstruction to the blood and nerve supply.

14 How often should coryza be treated?

The acute form should be treated daily, and the chronic form three times per week.

15 Give the treatment for coryza.

Relax all the cervical and dorsal tissues, remove the lesion, free the general circulation, give a thorough spinal treatment from the upper cervical to the sacrum, stimulate the lungs and heart, raise the clavicles and ribs, inhibit the superior cervical ganglion, open the mouth against resistance, treat the sides and root of the nose to

free the nostrils. The fifth nerve must have treatment; keep the kidneys and bowels active; the patient must not expose himself.

16 What is the prognosis?

Very good in all the forms of coryza.

CROUP.

(*Spasmodic Croup, False Croup.*)

1 Give the definition of spasmodic croup.

A spasm of the vocal cords excited by catarrh of the larynx.

2 What are the causes of croup?

Anatomical displacements, exposure to wet and cold, and improper use of the voice.

3 What may contracture of the muscles and tissues of the throat cause?

Irritation to the pneumogastric, the recurrent, and superior laryngeal branches. The contractures also prevent proper circulation to and from the larynx.

How may a displaced first rib favor inflammation of the mucous membrane?

By shutting off the venous and lymphatic drainage from the larynx.

5 What is the pathological condition in spasmodic croup?

The mucous membrane of the larynx is congested.

6 Give the symptoms of croup.

The attacks usually occur in young children, and at night. The child is awakened from sleep by a severe paroxysm of suffocative cough. The skin during the paroxysm is hot and dry. After a certain time, which varies according to the severity of the paroxysm, the cough ceases, the skin becomes moist, free perspiration follows, and the child falls to sleep. Two or three similar attacks may occur in the same night, but on the following day the child appears quite well.

7 Give the treatment for croup.

Relax all tissues involved, free the circulation, relieve the irritation to the superior and recurrent laryngeal nerves; treatment should be given along the throat and trachea, manipulate the hyoid bone

upward and laterally with great care; raise the clavicles and lower ribs, treat along the course of the carotid arteries, and internal jugular veins. During the spasm inhibition may be made upon the superior and recurrent laryngeal nerves. All sources of reflex irritation must be looked after. Hygiene is an important factor.

8 What is the prognosis?

Very favorable. Immediate relief is given by the treatment.

CYSTITIS

1 What is cystitis?

An acute or chronic inflammation of the mucous membrane of the bladder.

2 What are the causes of the acute form?

Lesions along the lower spine, irritation of foreign bodies in the bladder, retention of urine, extension of an urethritis to the bladder, or extension of a pyelitis to the bladder. It is often secondary to certain diseases, as scarlet fever, gout, diphtheria, rheumatism, etc.

3 What are the causes of the chronic form?

Anatomical displacements. It is generally a sequelæ to an acute attack, but gout, Bright's disease, etc., may cause it.

4 What are the symptoms of the acute form?

Announced by chills, rise in temperature, pain in the bladder, frequent and painful urination, the urine being voided drop by drop followed by severe straining. The urine is often mixed with pus, blood, and mucus. It is alkaline, and sometimes retid.

5 What are the symptoms of the chronic form?

Very little acute pain, but there is a dull pain in the bladder, with a great desire to urinate. The urine contains viscid mucus, or muco pus.

6 How long does the acute form last?

About one week.

7 How long does the chronic form last.

It may last for several years.

8 Where would you look for lesions in bladder trouble?

Along the lumbar and sacral regions.

9 Where is the urino-genital center of the spine?

From the second to the fifth lumbar.

10 The sensory nerve supply to the mucous membrane and neck of the bladder is derived from what region along the spine?

From the first, second, third and fourth sacral.

11 From what plexus is the vesical plexus derived?

The pelvic plexus.

12 What is the function of the vesical plexus in relation to the bladder?

It supplies the vaso-motor fibres to the blood vessels of the bladder.

13 Explain how a sacral or lumbar lesion might affect the bladder?

The pelvic plexus is connected with the lumbar and sympathetic and sacral nerves, and the vesical plexus, which supplies vaso-motor fibres to the blood vessels of the bladder, is derived from the pelvic plexus.

14 What is the object of the treatment?

To restore normal circulation.

15 Give the treatment.

Relax the spinal tissues; if a lesion is present remove it; give an inhibitive treatment over the hypogastric plexus. This will aid in controlling the circulation. If there is an enlarged prostate reduce it. The patient should remain lying down. Give a general treatment keep the kidneys and bowels free.

16 Why do you treat the hypogastric plexus?

To draw the blood to the abdominal vessels away from the bladder.

17 Where would you treat the pain and irritation of the bladder?

From the first lumbar down.

18 Why should the patient remain lying down?

Because when lying down the intra vesical pressure is not so great.

19 What kind of diet is recommended?

A very light diet, avoiding alcohol, highly seasoned foods, etc. The patient should drink much pure water for internal irrigation of the bladder.

20 In washing out the bladder what solution is recommended for septic cases?

A saturated solution of boric acid.

21 How often should an acute case of cystitis be treated?

About once or twice a day.

22 What might be done in the intervals between treatments to ease the pain?

Apply hot applications, give hot sitz baths, etc.

23 What is the prognosis?

Fairly good.

DIABETES INSIPIDUS.

1 What is diabetes insipidus?

A chronic condition characterized by the excretion of large quantities of pale, limpid urine of low specific gravity and free from albumin and sugar.

2 What are the causes of diabetes insipidus?

Anatomical displacements, traumatism, excitement, syphilis, overwork, acute infectious diseases, and the free use of cold drink when the body is over heated.

3 Where are the most common lesions found in diabetes insipidus?

Along the lower splanchnic area.

4 What organs may a lesion along the lower splanchnic area affect?

Kidneys.

5 How may a lesion in the upper cervical region cause diabetes insipidus?

By affecting the sympathetic system, or medulla. There is a point in the floor of the fourth ventricle, which, if punctured, may cause diabetes insipidus.

6 In which sex does diabetes insipidus most often occur?

Male.

7 What is the pathological condition in diabetes insipidus?

The kidneys are frequently enlarged and congested, and the ureters dilated. The polyuria is thought to be due to a vaso-motor paresis of the renal vessels, which permits a free transudation of liquid.

8 Give the symptoms of diabetes insipidus.

As a rule the onset is gradual, but when it follows a fright or injury it may develop quickly. There are two main symptoms, the passage of an enormous quantity of pale urine, and constant thirst. The general symptoms are such as malaise, headach, thirst, dry skin, dry tongue, constipation, mental apathy and emaciation.

9 How much urine is passed daily in diabetes insipidus?

It varies from twenty to sixty pints.

10 What is the specific gravity of the urine in diabetes insipidus?
1001 to 1005.

11 Upon what does the clinical recognition of diabetes insipidus rest?

The enormous amount of urine passed, its low specific gravity, and the absence of sugar and albumin.

12 Give the treatment for diabetes insipidus.

Remove the lesion, give a general spinal treatment paying much attention to the splanchnic area, raise the ribs, and equalize the circulation. A general treatment must be given for the nervous system.

13 What is the prognosis?

Good under osteopathic treatment.

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## DIABETES MELLITUS.

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1 What is diabetes mellitus?

A disorder of nutrition, characterized by the constant presence of sugar in the urine, associated with progressive loss of strength and flesh.

2 What are the forms of diabetes mellitus?

Acute and chronic.

3 What are the causes of diabetes mellitus?

Anatomical displacements, prolonged mental anxiety, traumatism, and dietetic errors.

4 Where are the most common lesions found in diabetes mellitus?

Along the spine from the middle dorsal to the lower lumbar regions.

5 What may lesions in the dorsal and upper lumbar regions cause?

Derangement of the functions of the kidneys, liver, pancreas, and intestines through the effects upon the splanchnics and solar plexus.

6 How may a cervical lesion cause diabetes mellitus?

By affecting the vagus through the sympathetic cervical connections, or through the coenectons with the solar plexus.

7 Diabetes mellitus occurs most often between what years?

The thirtieth and sixtieth.

8 Give the symptoms of diabetes mellitus.

Headache, impaired sexual power, dimness of vision, neuralgia, dry and harsh skin, loss of flesh and strength, the appetite is often inordinate, red tongue, bowels are usually constipated, and there are muscular cramps. The urine is increased in quantity, its color is pale, attracts flies in summer, and rapidly ferments. The total amount of glucose excreted in twenty-four hours varies from a few ounces to a pound.

9 What is the specific gravity of the urine in diabetes mellitus?

It ranges from 1015 to 1050.

10 What conditions are often complicated with diabetes mellitus?

Pulmonary tuberculosis, gangrene of the lungs, pneumonia, atrophy of the optic nerve, carbuncles, eczema, nephritis, neuritis and diabetic coma

11 Give the treatment for diabetes mellitus.

Remove the lesion; treat the heart, kidneys, lungs and spleen; restore the normal functions of the pancreas, liver, and intestines; stimulate the skin, and excretory system; spring the spine, treat the bowels for constipation, raise the ribs and give a thorough general systemic treatment. The patient should drink plenty of pure water and take light exercise. Regulation of the diet is very important.

The starchy and saccharine articles must be prohibited; a milk diet is often very beneficial. Food allowable;—Green vegetables, meats, acid fruits, and bread that is made from gluten or bran flour.

12 What is the prognosis?

Fairly good.

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## DIARRHEA.

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1 What is diarrhea?

An abnormal frequency and liquidity of fecal discharges.



2 What are the forms in regard to time?

Acute and chronic.

3 What are the varieties?

Inflammatory diarrhea, nervous diarrhea, vicarious diarrhea, colliquative diarrhea, irritative diarrhea, symptomatic diarrhea, choleraic diarrhea, and critical diarrhea.

4 What are the causes of diarrhea?

Anatomical displacements, enteritis, psychic influences, hysteria, coryza, improper diet, unripe fruits, etc.

5 What are the most important lesions?

Lesions in the lower dorsal and lumbar region.

6 What ribs are most often found luxated in diarrhea?

The eleventh and twelfth.

7 To what is irritative diarrhea usually due?

To the presence of some irritating substance in the bowel?

8 By what is the discharge of faeces regulated?

By a centre in the lumbar enlargement of the cord with afferent fibres from the rectum and efferent fibres to the sphincter ani.

9 How do you lessen peristalsis?

By stimulating the abdominal sympathetics.

10 How do you increase peristalsis?

By stimulating the pneumogastric.

11 The inhibitory fibres to the circular, and the motor fibres to the longitudinal muscle fibres of the rectum are from what nerves?

Sacral.

12 What is the duration of acute diarrhea?

From one to five days.

13 Give the treatment for diarrhea.

Relax the tissues along the spine, remove the lesion, inhibit the spine from the sixth dorsal to the coccyx, raise the ribs, free the general circulation and treat the liver. To relieve pain inhibit along the splanchnic area. The diet must be light and nutritious consisting of broths, etc. Keep the patient quiet and let him have plenty of fresh air. To allay the thirst give cracked ice. Hygiene is an important factor. Here is a very good treatment for diarrhea:-Have the patient lie on his face, place one hand over the lower lumbar region and the other beneath his knees, then press down with the hand on the lumbar region and at the same time lift up with the other hand, being careful not to lift too high and hurt the patient. This is very similar

to the breaking up the spine treatment. One of these treatments often cures a case of acute diarrhea.

14 What is the prognosis?

Very good under osteopathic treatment.

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## DILATATION OF THE HEART.

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1 What is dilatation of the heart?

A condition in which the cavities are distended, usually out of proportion to the diameter of their walls.

2 How many varieties of dilatation of the heart?

Three.

3 Name them.

(1) Dilatation with hypertrophy; (2) Dilatation with thinning of the heart walls; (3) Dilatation with little or no variation from the normal cardiac wall.

4 What does extensive dilatation of the chambers produce?

A dilated condition of the auriculo-ventricular rings.

5 What are the causes of dilatation of the heart?

Anatomical displacements, increased endocardial tension, physical strains, diminished resistance, infectious and valvular diseases, obstruction to circulation, etc.

6 What are the symptoms?

The onset is usually sudden, dyspnea, cardiac palpitation, venous pulsation in the neck, feeble apex beat, and there is usually pain in the precordial region.

7 What is revealed upon inspection?

Displacement of the apex-beat. Dyspnoea and cyanosis may be observed after exercise.

8 What is revealed upon palpation?

Weak cardiac impulse.

9 What is revealed upon percussion?

Area of cardiac dullness increased, and usually to the left.

10 What is revealed upon auscultation?

The sounds are short, feeble, abrupt and usually equal in duration. The first period of silence is usually prolonged. There are usually murmurs.

11 What is the prognosis?

Usually unfavorable.

12 Give the treatment.

Remove the lesion, relieve all obstructions to the circulation, stimulate the heart and lungs, raise the ribs, stimulate the accelerators. Keep the kidneys free. The patient must be kept quiet and free from excitement.

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## DIPHTHERIA.

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1 What is diphtheria?

An acute contagious disease, excited by the Klebs-Löffler bacillus, and characterized by moderate fever, glandular enlargements, great prostration, and a fibrinous exudation which is usually located in the throat.

2 What are the causes of diphtheria?

The predisposing cause is anatomical displacement, the exciting cause is the Klebs-Löffler bacillus, which is found only in the membranous exudation.

3 Where look for bony lesions causing diphtheria?

In the cervical region.

4 With what may bony lesions and muscular contractures in the cervical region interfere?

The innervation of the muscles and mucous membrane of the throat.

5 How may an upper cervical lesion cause diphtheria?

By affecting the superior cervical ganglion, deranging the sympathetic vaso-motor supply of the pharyngeal mucous membranes, and laying them more susceptible to the exciting cause.

6 What is the pathological condition in diphtheria?

The characteristic membrane is usually found upon the tonsils, pillars, and pharynx, but may extend to adjacent parts. This membrane is of a grayish white color, and dips deep into the mucous membrane from which it is hard to separate, and when separated always leaves a raw bleeding surface. Sometimes the necrosis extends to the deeper tissue and causes wide spread ulceration and even gangrene. The lymphatic glands of the neck, and the spleen



are swollen. In some cases the blood is dark and fluid while in others firm clots are found within the heart.

7 Give the symptoms of faucial diphtheria.

The onset is marked by chills, moderate fever, malaise, and sore throat. The patient complains of difficult swallowing, and the muscles of the neck feel stiff. The pulse becomes rapid and feeble, the fever is not very high, and its course is quite irregular. The urine is scanty and often albuminous, the bowels are constipated. The prostration and pallor are often out of all proportion to the severity of the febrile symptoms.

8 Give the symptoms of laryngeal diphtheria or membranous croup.

Laryngeal diphtheria or membranous croup is usually secondary by extension from the fauces, but it is occasionally primary. It is recognized by hoarseness, croupy cough, dyspnoea, and stridulous breathing. Shreds of false membrane are sometimes expectorated in the violent fits of coughing. The febrile symptoms are usually slight.

9 Give the symptoms of nasal diphtheria.

Nasal diphtheria is nearly always secondary. It is recognized by high fever, marked glandular involvement, and great prostration, by an offensive discharge from the nose, epistaxis, and excoriation of the lips. The false membrane may be detected on inspection.

10 What conditions are often complicated with diphtheria?

Pneumonia, capillary bronchitis, and inflammation of the heart.

11 What is the period of incubation?

From two to ten days.

12 Give the treatment for diphtheria.

Relax all tissues involved, remove the lesion, raise the clavicles and depress the first ribs, free the circulation to the affected part, treat the vagus, superior cervical ganglion, cervical sympathetics, splanchnics, liver, kidneys, and bowels; give the internal throat treatment, by inserting the finger and sweeping it down over the hard and soft palate, fauces, and tonsils. Proper precautions should be taken to protect the finger. A general systemic treatment should be given, stimulate the heart and lungs, the patient should be isolated, and the usual antiseptic precautions should be practiced. The diet should consist of less solids and more fluids than in health. Do not remove the characteristic membrane which is formed upon the tonsils, pillars and pharynx; it is formed there to guard the parts

against coming injuries. Dr. Still says it would be just as wise to remove the bark from our fruit trees expecting the trees to do better without the bark than to let it stay where nature put it until the tree grew its wood and fruit and dropped its old bark. Let the false membrane stay where nature has placed it until it has done the work for which it has been formed.

13 What is the prognosis?

Good under osteopathic treatment.

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## DYSENTERY.

(*Bloody Flux.*)

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1 What is dysentery?

An acute, catarrhal or croupous, inflammation of the mucous membrane of the colon, characterized by fevers, bloody stools, and violent tenesmus.

2 What are the causes of dysentery?

Anatomical displacements, exposure to atmospheric changes, bad hygeinic surroundings, and ingestion of irritating food. The tropical form seems to be excited by the amoeba.

3 What is the pathological condition in dysentery?

There is hyperaemia and inflammation of the mucous membrane of the colon. The swelling of the mucous membrane closes the follicles. Often some of the capillaries in the walls of the follicles rupture and fill them with blood. The follicles may discharge their contents and form ulcers. In the amoebic dysentery we find amoeba in the ulcers. In the malignant form there is the formation of a false membrane which ulcerates and sloughs off.

4 What conditions are often complicated with dysentery?

Typhoid fever, peritonitis, and abscess of the liver.

5 What is the duration of dysentery?

About ten days, but often lasts longer. Osteopathic treatment cuts it short in any stage.

6 What are the varieties of dysentery?

Acute catarrhal or sporadic dysentery, amoebic or tropical dysentery, malignant or diphtheric dysentery, and chronic dysentery.

7 Give the symptoms of acute catarrhal dysentery.

Moderate fever and its associated phenomena, colic, prostration, abdominal tenderness, tenesmus with small, mucus, and bloody stools.

8 Give the symptoms of amœbic dysentery.

The symptoms are similar to catarrhal dysentery, but the disease is more protracted and often marked by intermissions and exacerbations; the stools are more fluid and contain the amœba coli; abscess of the liver is a more frequent complication than in other forms of dysentery.

9 Give the symptoms of malignant dysentery.

To the ordinary symptoms the following typhoid phenomena are added. Brown fissured tongue, subsultus, carphologia, muttering delirium, and stupor. The stools also contain false membrane and sloughs.

10 Give the symptoms of chronic dysentery.

Tenesmus and pain may be absent. There is great loss of flesh and strength, extreme anæmia; the discharges contain considerable mucous and at times are bloody.

11 Give the treatment for dysentery.

The treatment and lesions are identical with those described for diarrhoea.

What is the prognosis?

Very good.



## EMPHYSEMA.

1 What is emphysema?

A condition in which air distends the air vesicles or interlobular cellular tissues of the lungs.

2 What are the forms of emphysema?

Interlobular and vesicular.

3 What produces interlobular emphysema?

Rupture of the air cells, and air getting into the interlobular connective tissue of the lungs.

4 What are the causes of interlobular emphysema?

Anatomical displacements, injuries, violent coughing, blowing wind instruments, etc.

5 What is vesicular emphysema?

Dilatation of the alveoli due to unequal pressures.

6 What are the varieties of vesicular emphysema?

Compensating, hypertrophic and atrophic.

7 What is the shape of the thorax in emphysema?

Barrel shape.

8 Give the symptoms of emphysema.

The face is usually puffed and assumes a purplish aspect.

There is dyspnoea; during an attack of coughing the face becomes bluish.

9 What are the most common lesions present?

Rib, vertebral, and contracture of spinal muscles.

10 Give the treatment for emphysema.

Relax all contracted muscles, remove the lesion, stimulate the vaso-motor area of the lungs, increase the circulation, increase motor power to the lungs by stimulating the pneumogastric nerve, raise the clavicles. When raising the ribs have the patient take a deep breath, and when he expires compress the ribs; stimulate the heart, give a general treatment.

11 What is the prognosis?

Fair under osteopathic treatment.

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## ENDOCARDITIS.

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1 What is endocarditis?

An inflammation of the endocardium, usually confined to the valves.

2 What is the endocardium?

The lining membrane of the heart.

3 What is endocarditis apt to produce?

Valvular lesions.

4 What are the varieties?

Acute, chronic, and chronic.

5 What are the causes of endocarditis?

An infection of the lining of the organ by the poisonous products of diseases, such as rheumatism, gout, syphilis, and Bright's disease.

6 What will lesions to the cardiac plexus cause?

A weakening of the heart, laying it more liable to the effect of the poisonous products.

7 What may a lesion to the vagus cause?

A disturbed nutrition to the heart.

8 What is the function of the vagus in relation to the heart?

It contains vaso-motor fibres to the heart and has charge of the trophic conditions and is a motor depressant.

9 What are the symptoms?

The only sure signs are those furnished by auscultation, murmurs over the various cardiac orifices, and a prolongation of heart sounds. The characteristic subjective symptoms are wanting.

10 What is the pathological condition in the acute form?

Swelling of the valves. They are red and lustreless and are roughened from a growth of vegetations.

11 What is the pathological condition in the ulcerative form?

The tissues are softened, ulcers and abscesses are formed, inflammation goes on to ulceration.

12 What is the pathological condition in the chronic form?

The valves become hardened and thickened from over growth of fibrous tissue.

13 Give the treatment.

Remove the lesion and all causes of irritation, keep the patient in bed, stimulate the vagus, inhibit the accelerators, raise the ribs, give the abdominal treatment to draw the blood away from the heart, stimulate the bowels, kidneys, and liver so as to help excrete the poisons, inhibit from the 1-to 6th dorsal. Give a general cervical and spinal treatment to quiet the nervous system, and to relieve headache and delirium.

14 How is the precordial pain and dyspnea relieved?

By raising the ribs, elevating the arms and holding them behind the head.

15 What is the prognosis?

In the acute form it is good; in the chronic and ulcerative forms it is usually very unfavorable.



## ENTEROPTOSIS.

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What is enteroptosis?

The descent of the intestines from their normal position.

2 What is coincident with this disease?

Gastroptosis, nephroptosis, and prolapse of other viscera.

3 In which is it most common, male or female?

Female.

4 What are the most common lesions present?

Spinal, rib, diaphragmatic and abdominal lesions.

5 Where would you look for the spinal lesions?

Anywhere along the splanchnic or lumbar areas.

6 What ribs are likely to be displaced?

Any of the lower six ribs on either side.

7 What causes the disease?

Lesions.

8 What causes the lesions?

Tight lacing, traumatism, muscular strains, numerous pregnancies, rapid emaciation, etc.

9 The diaphragm is in what condition?

A very weak condition. It has lost its tone.

10 How might the spinal and rib lesions produce enteroptosis?

By interfering with the spinal sympathetic connections of the viscera.

11 How would this produce enteroptosis?

By impeding circulation and nerve supply, vaso-motor, motor, secretory, trophic and sensory, which produces derangement of function in the organs and weakens their mesenteric supports.

12 Give the symptoms for enteroptosis.

The intestinal, gastric and other bodily functions are disturbed; excessive flatulence, constipation generally prevails, and some times alternates with diarrhea. Loss of flesh and nervous symptoms; lack of ability to work. Sometimes this condition exists without symptoms

13 When the viscera sink down into the abdominal cavity, what is the appearance?

The lower abdomen is prominent, and the upper abdomen is hollow.



14. The hollow in the upper abdomen gives to it a peculiar boat-shaped appearance. Describe it.

It is the epigastrium.

15. Describe the treatment for enteroptosis.

The treatment may be both constitutional and local. Any lesion of nutrition, by depriving the afferent nerve and blood supply to the organs, results in atrophy of the abdominal walls and diaphragm, stimulate over the lumbar and sacral areas. In the treatment of the abdominal organs, the patient lies on his back, flex his legs so as to relax the abdominal wall. When the viscera are replaced it frees the circulation and nerve supply, and removes pressure of organs upon each other. All this aids the omenta to hold the parts in place. A thorough stimulation of the heart and lungs must be given, attention must also be given to the kidneys. The patient should be out of doors as much as possible; must not worry; deep breathing and exercise are helpful.

16. What is the prognosis?

Very favorable, but the progress of the case is likely to be slow. Some cases yield slowly though relief is soon given. Generally improve as treatment commences. It generally takes an extended course of treatment to effect a cure.

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## ENURESIS.

*(Incontinence of Urine.)*

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1. What is enuresis?

An inability to retain the urine. A neuroses due to spinal lesions which involves the sphincteric center of the bladder.

2. Where do lesions most often occur?

In the lower lumbar and sacral regions.

3. From where are the motor fibres of the circular muscles and sphincter of the bladder derived?

From the lumbar portion of the sympathetic.

4. By way of what plexuses?

Aortic, hypogastric, and pelvic plexus, and also the inferior mesenteric ganglion.

5 What nerves furnish the main motor supply to the longitudinal muscle fibres of the bladder?

The sacral nerves

6 To what is enuresis due?

Lesions, bodily weakness, typhoid, pulmonary tuberculosis, over distention of the bladder, with partial paralysis of the sphincter, cystitis, pressure from an anteflexed uterus upon the fundus of the bladder and parasites.

7 To what is the spasmodic incontinence due?

To over action of the compressor muscles of the bladder.

8 To what is nocturnal enuresis due?

To some local irritation acting upon a hypersensitive organism, such as the presence of ascarides, an elongated prepuce, contraction of the urethral meatus, or masturbation.

9 What is the bladder?

It is the reservoir in which the urine is collected from the ureters.

10 How many coats has the bladder?

It has four.

11 Name them.

Mucous, areolar, muscular and serous.

12 How much does the bladder hold?

About a pint.

13 Give the blood supply of the bladder.

The arteries are the superior and inferior vesical, and in the female, the uterine also; its veins are radicles of the internal iliac.

14 Give the nerve supply of the bladder.

The nerves are derived partly from the sympathetic system through the hypogastric plexus, partly from the cerebro-spinal system through the 3rd and 4th sacral nerves. The former supplies the mucosa, the latter the muscularis.

15 Where stimulate to cause a reflex contraction of the bladder?

Along the 1-2-3-4th sacral.

16 Give the treatment.

Relax the spinal tissues, remove the lesion, stimulate along the lumbar and sacral regions, treat over the hypogastric plexus and the internal iliac vessels. If a prolapsed uterus exists, replace it. Give a good general treatment.

17 What is the prognosis?

Very favorable.

## EPILEPSY.

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1 What is epilepsy?

A condition characterized by attacks of unconsciousness. Convulsions may or may not be present.

2 What are the main forms of epilepsy?

Petit mal, Grand mal and Jacksonian.

3 What are the causes of epilepsy?

Anatomical displacements, constipation, obstruction to circulation, prolapse of diaphragm, worms, syphilis, eye strain, alcoholism and traumatism.

4 What are the most important lesions?

Cervical.

5 Why are the cervical lesions most important?

Because they usually interfere with the blood and nerve supply to the brain and cord.

6 Which is more susceptible, the young or old?

The young.

7 What is the condition in petit mal?

The unconscious period is very short, and convulsions are absent.

8 What is the condition in grand mal.

The unconsciousness is prolonged and there are severe convulsions.

9 What is the condition in Jacksonian or cortical epilepsy?

The convulsions are localized and unconsciousness may or may not occur.

10 Give the symptoms of petit mal.

The attack comes on suddenly, the patient may be talking, his expression becomes blank, his face pale, the pupils dilate and he is unconscious. But in a few seconds he is alright and goes on talking. Convulsions never occur. The patient may appear dazed, but very seldom falls. Some times a dreamy state takes the place of an ordinary attack.

11 Give the symptoms of grand mal.

There may or may not be warning of the attack. The patient falls where ever he may be. During the paroxysmal period the muscles are contracted and the fingers are clinched. This period lasts but a few seconds before clonic convulsions appear. The jaws work and form froth with the saliva. The control of the bowels

and bladder may be lost. After the convulsion the patient drops off into a deep sleep and when he awakes he is worn out and confused.

12 Give the symptoms of Jacksonian epilepsy.

The symptoms are usually characterized by spasms that are generally local in character. Consciousness is preserved in the milder forms. Tingling may precede an attack.

13 Upon what do we base our diagnosis?

The symptoms.

14 Give the treatment for epilepsy.

When an attack is threatening, strong pressure in the sub-occipital fossæ usually prevents it. To lessen the attack stimulate the solar plexus. During an attack loosen the clothing; put a handkerchief or something between the teeth. Do not put any thing between the teeth which the patient might swallow. To cure the case a course of treatment must be had. Remove the lesion, raise the ribs and clavicles, free the circulation to and from the brain, keep the kidneys and bowels active. Patient should drink freely of water. Hygiene is an important factor.

15 What kind of diet is recommended?

A light and easily digested diet, such as cereals, fruits and vegetables, avoiding meats and fats.

16 What is the prognosis?

Usually very favorable in all forms except Jacksonian epilepsy.

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## EPISTAXIS.

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1 What is epistaxis?

Nose bleed.

2 What are the causes of epistaxis?

Cervical lesions, affections of the nasal mucosa, internal or external injuries, fracture of the skull, infectious fevers, and over exertion.

3 Give the symptoms of epistaxis.

There is usually weakness; the blood usually drops slowly from one or both nostrils, except when due to a blow; the blood may work its way into the pharynx and be coughed up, or it may be swallowed and vomited.

4 Give the treatment for epistaxis.

Form a clot as soon as possible, slow the blood flow in the carotid arteries, hold the facial artery where it runs over the inferior maxillary bone, treat the superior cervical tissues, raise the ribs and clavicles, press the nasal artery, inhibit the accelerators of the heart. In severe cases it may be necessary to plug the posterior nares.

5 What is the prognosis?

Good under osteopathic treatment.



## ERYSIPELAS.

(*St. Anthony's Fire.*)

1 What is erysipelas?

An acute contagious disease excited by streptococci, and characterized by a peculiar inflammation of the skin and subcutaneous tissues, irregular fever, and a tendency to relapse.

2 What are the causes of erysipelas?

The predisposing causes are anatomical displacements, or any conditions which lower the vitality of a person. The exciting cause is the streptococcus erysipelatus.

3 What is the pathological condition in erysipelas?

Erysipelas most frequently manifests itself on the face. The various strata of the skin are infiltrated with serum; leucocytes and streptococci are found in the lymph spaces. In severe cases the inflammatory products are converted into pus, and abscesses form.

4 Give the symptoms of erysipelas.

The onset may begin with a chill, slight fever, malaise, and tingling in the part about to be affected. During the first twenty-four hours, the locality to be affected, which is generally about the nose or on the cheek, becomes swollen from the edema; it is red and shiny in appearance, with a well developed line of demarcation between the diseased and healthy skin. Vesicles filled with clear serum often form on the part; several vesicles may unite forming one large bulb. In about four or five days the redness begins to fade and the swelling to subside. Relapses are very common.

5 What are the most common lesions found in erysipelas?



Bony lesions along the cervical region, and lesions of the first ribs and clavicles.

6 How may a cervical lesion cause erysipelas?

By pressure directly upon veins and lymphatic vessels preventing the proper drainage of the part, or by deranging the vaso-motor innervation of the lymphatics.

7 What conditions are often complicated with erysipelas?

Albuminuria, septicæmia, pneumonia and ulcerative endocarditis.

8 What is the period of incubation?

From three to seven days.

9 When is erysipelas termed erysipelas phlegmonous?

When the edema is very great.

10 When is erysipelas termed erysipelas ambulans?

When it wanders.

11 Give the treatment for erysipelas.

Relax all tissues involved, remove the lesion, give a general neck treatment to free the circulation from the head, keep the liver, kidneys and bowels active, re-establish the lymphatic and venous drainage of the affected part, gain vaso-motor control, give a general spinal treatment to strengthen the general nervous system, and anoint the affected parts with carbolized vaseline. It is not necessary to manipulate the inflamed part. The diet is very important. It should be light and nutritious. Hygiene is also an important factor.

12 What is the prognosis?

Good.

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## ESOPHAGITIS.

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1 What is esophagitis?

An acute inflammation of the mucous or sub-mucous coats of the esophagus, or both.

2 Name the coats of the esophagus.

Muscular or external, areolar or middle and the mucous or internal coat.

3 Give the arteries of the esophagus.

They are derived from the inferior thyroid branch of the thyroid



axis, from the descending thoracic aorta and gastric branch of coeliac axis.

4 Give the nerves of the esophagus.

They are derived from the pneumogastric and sympathetic.

5 What are the causes of esophagitis?

Anatomical displacements, traumatism, irritants, extension of inflammation from surrounding parts, infectious fevers, small-pox, etc.

6 Where do the lesions usually occur?

In the cervical region.

7 Give the symptoms of esophagitis.

There is pain beneath the sternum during swallowing, there may be blood mucus and pus discharged, later follicular ulcers may appear.

8 What may the healing of suppurating ulcers cause?

Cicatricial stenosis.

9 Give the treatment for esophagitis.

Raise the ribs and clavicles, remove the lesion, give a general spinal treatment, free the general circulation, remove the cause of irritation; patient may eat cracked ice; the kidneys and bowels must be kept free, the diet must be soothing and nutritious. If the case be severe, rectal alimentations may be given with great benefit.

10 What is the prognosis?

Under osteopathic treatment it is very good.

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## FATTY HEART.

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1 What is the definition of "fatty heart"?

A fatty degeneration of the fibres of the heart muscle.

2 What is the heart?

A hollow, muscular or otherwise contractile organ which receives blood in its interior and by contraction drives it out again, thus keeping up the circulation of the blood.

3 Where is the heart situated?

In the middle mediastinal space.

4 What are the causes of "fatty heart"?

Anatomical displacements, obstruction to the coronary arteries,

cancer, alcoholism, phthisis, phosphorus poisoning, or any thing that interferes with the nutrition of the heart.

5 What is the pathological condition?

The muscle fibres are infiltrated with fat granules, and the muscle is soft, pale in color and easily torn.

6 Give the symptoms of "fatty heart."

The patient is easily fatigued, cold extremities, dyspnoea, palpitation, and vertigo. The pulse is rapid, feeble, and irregular, and there are various pulmonary and gastro-intestinal symptoms.

7 To what is the irregular pulse, dyspnoea, cold extremities and palpitation due?

To cardiac dilatation.

8 Which side of the heart is most apt to be affected?

The left side.

9 "Fatty heart" is often secondary to what?

To cardiac hypertrophy.

10 How may a lesion to the vagus cause fatty degeneration of the heart?

The vagus helps to make up the cardiac plexus, and the coronary plexus is derived from the cardiac plexus. The coronary plexus controls the coronary arteries, hence a lesion to the vagus, acting through the cardiac and coronary plexuses may so affect these vessels as to narrow their lumen, causing mal-nutrition, and as a result we have fatty degeneration of the heart.

11 What is revealed upon inspection?

Anxious expression, and the patient may be observed to be suffering with a fit of dyspnoea. The pulse is not observable owing to its feebleness.

12 What is revealed upon palpation?

Weak impulse; pulse may be slow and feeble, or irregular and intermitting, changing from 20 to 30 beats per minute to 150; but it is always weak.

13 What is revealed upon auscultation?

The first sound of the heart is short, high pitched, and weak. Second sound is feeble but distinct. Murmurs may be present, but they are rare.

14 In what class of people does fatty infiltration usually occur?

The class who indulge in rich food, big dinners, etc.

15 Where does fatty infiltration usually start?

In the auriculo-ventricular groove.

16 Give the treatment for fatty heart.

Relax the spinal tissues, remove the lesion, stimulate the heart by stimulating the accelerators in the upper dorsal region and the sympathetics in the neck. Free the entire circulation; raise the ribs and clavicles. When a pseudo-apoplectic attack occurs, lay the patient on his back, raise the ribs, relax all spinal muscles, and stimulate the heart. An abdominal treatment should be given to draw the blood to the abdominal vessels.

17 What is the prognosis?

Usually unfavorable, death may occur at any time.

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## GASTRITIS.

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1 What is gastritis?

A catarrhal inflammation of the mucous membrane of the stomach.

2 What are the causes of gastritis?

Anatomical displacements, indigestible food, alcoholism, certain drugs, and irritation to the mucous membrane.

3 Give the symptoms of gastritis.

Loss of appetite, headache, constipation, fever, accelerated pulse, thirst, and coated tongue. After eating there is distress and a dull pain referred to the epigastrium, nausea and vomiting may or may not be present, if vomiting occur it consists of undigested food and mucus. Offensive breath exists.

4 What is the pathological condition?

The mucous membrane is swollen, dark red in color and covered with a tenacious muco-pus.

5 Where do the most important lesions occur?

In the splanchnic area.

6 What nerve may a lesion of the upper cervical region affect?

The pneumogastric.

7 What nerves are affected by luxated ribs?

Mainly the intercostal nerves, but the spinal nerves may also be interfered with.

8 What plexus has charge of the functional activities of the stomach?

The solar plexus.

9 What is the function of the pneumogastric in relation to the stomach?

It carries sensory, motor and secretory fibres to it.

10 Name the coats of the stomach.

Serous, muscular, sub-mucous and mucous.

11 Give the nerve supply of the stomach.

Right and left pneumogastric and branches from the solar plexus of the sympathetic nerves.

12 Give the blood supply of the stomach.

Gastric artery, pyloric, gastro-epiploic arteries, (right and left). and the vaso brevia. The gastric arises from the coeliac axis, pyloric and right-epiploic are branches of the hepatic artery. The left gastro-epiploic and vasa brevia are branches of the splenic artery.

13 How often should gastritis be treated?

The acute cases should be treated twice every day, and the chronic cases should be treated three or four times per week.

14 Give the treatment for gastritis.

Relax the spinal muscles, especially those of the splanchnic area, remove the lesion, correct the circulation, treat the solar plexus, give a general spinal treatment paying much attention to the splanchnic area, raise the ribs, relieve <sup>the</sup> stomach of the irritating contents, inhibit from the sixth to the ninth dorsal, keep the bowels, liver and kidneys active. The diet must be very light. In treating all stomach diseases special attention should be given to the splanchnic area.

15 What is the prognosis?

Very good in both acute and chronic cases under osteopathic treatment.

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## GLOSSITIS.

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1 What is glossitis?

A parenchymatous inflammation of the tongue, which may be either acute or chronic.

2 Name the arteries of the tongue.

Facial, lingual and the ascending pharyngeal.

3 What are the nerves of the tongue?

The lingual branch of the fifth nerve, the lingual branch of the glosso-pharyngeal, the hypoglossal and the chorda tympani branch of the seventh nerve.

4 What are the causes of glossitis?

Anatomical displacements, direct irritation to the tongue, stings of insects, burns, scalds, action of corrosives, etc.

5 What is the pathological condition?

The tongue is swollen, red and covered with a thick secretion; small abscesses often form on the tongue.

6 Give the symptoms of glossitis.

Restlessness, anxiety and difficult swallowing; the mouth is often open, due to the swelling of the tongue; the tongue is hyper-æmic; usually there are small abscesses found on the tongue.

7 Give the treatment for glossitis.

(See stomatitis.)

8 What is the duration of glossitis?

From two to ten days.

9 What is the prognosis?

Good.

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## GOITRE,

(*Bronchocele.*)

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1 What is a goitre?

A chronic hypertrophy or hyperplasia of a portion or the whole of the thyroid gland.

2 What is an exophthalmic goitre?

A chronic glandular neurosis characterized by rapid heart beat, enlargement of the thyroid gland, protrusion of the eyeballs, and various neurasthenic and vaso-motor symptoms.

3 What are the causes of goitre?

Anatomical displacements, emotional disturbances, traumatism, prolonged mental or physical strain, and severe acute diseases.

4 Give the symptoms of simple goitre.

Enlarged thyroid gland. The goitre develops very gradually, and often more enlarged on the right side and in front than on the left side. It is not infrequently observed to increase in size with



each succeeding pregnancy and during or after each menstrual flux. The goitre is painful, it rises and falls during the act of swallowing and moves with the larynx. The veins covering the goitre are swollen and prominent; it sometimes causes dyspnea; the pulse is increased; auscultation often reveals a loud blowing murmur, especially marked in the vascular bronchoceles.

5 Give the symptoms of exophthalmic goitre.

Tachycardia and pulsating arteries, goitre, exophthalmos, tremor, nervousness, insomnia, sweating, subjective sensations of heat, and diarrhoea.

6 What lesions are often found in goitre?

Lesions of the cervical vertebræ, clavicle and first rib. The first rib is usually found displaced upward.

7 How may lesions of the clavicle, first rib, or anterior cervical tissues cause goitre?

By obstructing arterial, venous and lymphatic currents to and from the gland.

8 What kind of a gland is the thyroid gland?

A ductless gland.

9 What are the arteries of the thyroid gland?

Superior and inferior thyroid, and sometimes an additional branch from the innominate artery.

10 From what are the nerves to the thyroid gland derived?

The middle and inferior cervical ganglion of the sympathetic.

11 In which sex is goitre most common?

Female.

12 Between what years does goitre most often occur?

Fifteenth and thirty-fifth.

13 Give the treatment for goitre.

Relax all tissues involved, remove the lesion, free the lymphatic and venous drainage, raise the clavicles and depress the first ribs, treat along the course of the vein which drains the goitre; pressure given with great care is made downward over the goitre. In exophthalmic goitre the cervical sympathetics must be toned so as to overcome the vaso-motor paresis. The pressure of the eye-balls back into the orbit should be given with great care; give the inhibitive cardiac and local eye treatments. The patient must have rest, and be quiet and free from excitement and worry; the diet must be nutritious. The removal of the lesion is often all that is necessary to cure.



14 What is the prognosis?

Usually unfavorable under medical treatment, but very favorable under osteopathic treatment.

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## GOUT.

(*Podagra.*)

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1 What is gout?

A painful constitutional or diathetic disease with joint inflammation and chalky deposits, and an increase of uric acid in the blood.

2 What are the principal forms of gout?

Acute, chronic and irregular.

3 What are the causes of gout?

Anatomical displacements, exposure, excess of food and sweet wines. Poor man's gout is due to an excessive use of malt beverages.

4 Give the symptoms of acute gout.

The attack usually occurs early in the morning, between one and three. The onset is sudden, with vicelike pain in the metatarso-phalangeal joint of the great toe. There is fever, chill, insomnia, and restlessness. The pain lessens by morning and may disappear during the day. There is heat, redness, swelling, and excessive sensitiveness of the joints. During the attack the urine is scanty, high colored and acid. The ankle, midtarsal and knee joints, and outer side of the foot are frequently involved, but the first joint of great toe is by far the most often affected. There is no tendency to suppuration.

5 How long does an acute attack last?

Usually from four to eight days.

6 Give the symptoms of chronic gout.

The transition is gradual, the intervals between attacks shorter, while the attacks themselves grow milder and longer. At last the local inflammation does not appear. The condition extends to other joints. The gradual deposit of sodium urate in the articular surfaces of the joints, and later in the surrounding tissues, with the continued inflammation, produces first disability, later deformity. The deposits in long standing cases may be exposed by ulceration, especially about the finger joints.

7 Name some conditions associated with chronic gout.

Chronic gastric catarrh, arterio-sclerosis, cardiac hypertrophy and chronic intestinal nephritis. In the later stages, the gout symptoms are associated with those of eczema, endarteritis, diabetes, nephritis, bronchitis and endocarditis.

8 Give the symptoms of irregular gout.

Gout manifesting itself anywhere but in a joint is to be considered irregular. The symptoms are varied. Irregular gout rarely occurs in persons who have had previous typical attacks. The muscular pains may be anywhere; there are gastro-intestinal disturbances, migraine, sciatica, tingling, itching, burning sensations, and pain in the palms of the hands and soles of the feet, the urine is highly colored, of high specific gravity, often scanty, and the standard specimen deposits lithic acid.

9 How do you distinguish chronic rheumatism from gout?

Gout involves chiefly the small, and chronic rheumatism chiefly the large joints. Moreover chronic intestinal nephritis and arterio-sclerosis, with their varied and often serious consequences are frequently attendant upon gout, but not upon chronic rheumatism.

10 Where are the lesions found in gout?

The most common lesions found are in the joints of the great toe, the astragalus, or of the part affected. Lesions are also found along the kidney area.

11 What is the object of the treatment?

The object of the treatment is to absorb the deposits by freeing the nerve and blood supply to the parts affected.

12 Give the treatment for gout.

Remove the lesion; to relieve the pain, carefully manipulate the joint and free the circulation about it, treat the spinal origin of parts involved, give a general muscular treatment to the limbs, stretch the joints, have the patient drink much pure water, keep the bowels, liver, and kidneys active; the parts may be wrapped in cotton during the intervals of treatment; the kidneys must be kept active in order to free the system of the urates; the diet is very important; such food as rice, hominy, vegetables, fruits, fish and fowl may be taken, but avoid other meats, fats, and alcoholic beverages.

13 What is the prognosis?

Very good under osteopathic treatment.

## HAY FEVER.

(*Autumnal Catarrh; Hay Asthma.*)

1 What is hay fever?

A disease of the upper respiratory tract.

2 What kind of a disease is it?

An inflammatory or catarrhal condition.

3 By what other name is hay fever designated?

Autumnal catarrh.

4 What is the cause of hay fever?

Specific lesions.

5 Where are these lesions found?

In the upper dorsal and cervical regions.

6 With what do these lesions interfere?

They interfere with the motor, vaso-motor and sensory innervations; also the blood-vessels of the upper respiratory tract, thus causing a weakening of the vitality of the membranes of the respiratory tract and laying them liable to the effect of certain irritants.

7 What are some of the irritants?

Pollen of flowers and dust from vegetation.

8 What two diseases are found complicated with hay fever?

Asthma and bronchitis.

9 Why are asthma and bronchitis complicated with hay fever?

Because the lesions for these conditions occur at the same area of the spine.

10 What bony lesion must you look for besides the vertebræ and ribs?

Clavicle.

11 What ribs are most likely to be luxated in hay fever?

The first and second ribs.

12 What structures would a lesion of the clavicle and upper ribs be likely to affect?

The vagus, cervical sympathetic and vaso-motor nerves.

13 What cranial nerve is affected through the cervical sympathetic?

The trifacial nerve.

14 What is the function of the trifacial nerve?

It is sensory to the head and face and motor to the muscles of mastication.

15 What else may cause an attack of hay fever besides pollen and dust?

The presence of a nasal polypus, emotional excitement and hypertrophied mucous membranes.

16 Does the length of standing of the case have anything to do with the length of time necessary to cure?

No, the long standing cases are cured in about the same length of time as the short standing cases.

17 Give the symptoms of hay fever.

Redness of the conjunctivæ and swelling of the eyelids, pruritus of the pharynx, nose and eyes, sneezing, obstruction of the nostrils, watering of the eyes, a copious discharge of mucus from the nose, headache, cough, etc.

18 In the treatment what must you first do?

Find the lesion and correct it.

19 What muscles should be relaxed?

The upper spinal, thoracic and neck muscles.

20 Why should the muscles be relaxed?

To free circulation and release tension upon nerves.

21 What nerve should be treated for itching of the eyes, swelling of the face and rhinorrhea?

The trifacial nerve.

22 Where would you treat to get an effect upon the tri-facial nerve?

In the sub-occipital fossæ to affect the superior cervical ganglion.

23 Why is treatment given along the side of the nose?

To free the blood vessels and nerves, and to reduce the swelling and irritation in the mucous membranes.

24 What would you do to quiet the sneezing?

Inhibit the phrenic nerve.

25 How often should hay fever be treated?

About three times per week.

26 What is the prognosis?

Very good under osteopathic treatment.

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## HEMORRHAGE OF THE LUNGS.

1 What is broncho-pulmonary hemorrhage?

A condition due to bleeding into the bronchus, whence it is coughed up and expectorated.

2 What is pulmonary infraction?

A hemorrhage into the luugs without destruction of the lung tissue.

3 What is pulmonary apoplexy?

A diffused hemorrhage into the air cells and intestinal tissue, usually with destruction of the lung tissue.

4 What are the causes of pulmonary infarction?

Anatomical displacements, heart disease, and stoppage of branches of the pulmonary arteries.

5 What are the causes of pulmonary apoplexy?

Anatomical displacements, traumatism, change in the walls of the arteries, wounds, rupture of thoracic aneurism, etc.

6 Give the symptoms of pulmonary infarction.

If the infarction be small there may be spitting of a few small clots of blood, but if the infarction be large, there will be expectoration of dark blood. There is dyspnoea and cough.

7 Give the symptoms of pulmonary apoplexy.

The skin is pale, urgent dyspnoea, and symptoms of collapse.

8 Name some of the common lesions.

Rib, clavicle and spinal, also muscular lesions along the spine.

9 What is a lesion to the vagus nerve liable to cause?

A weakened condition of the lung laying it liable to the action of numerous causes which may result in pulmonary hemorrhage.

10 Give the treatment.

Keep the patient quiet, inhibit the heart, treat the abdomen to call the blood from the lungs, form a clot as soon as possible, relax the spinal and intercostal muscles; don't remove the lesion until the patient is feeling well, avoid stimulating drinks and strengthen the lungs; later free the circulation so the clot will be absorbed.

11 Why do you want to absorb the clot?

To prevent the formation of gangrene or abscesses.

12 How would you inhibit the heart?

By giving a gentle inhibitive treatment from the second to the fifth dorsal.

13 What is the prognosis?

Generally speaking it is fair, but must be guarded.



## HYDRONEPHROSIS.

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1 What is hydronephrosis?

A condition in which obstruction to ureters, bladder or urethra causes accumulation of urine in the pelvis and calyces of the kidney.

2 What might this accumulation of urine in the pelvis and calyces of the kidney cause?

It might cause dilatation, pyelitis, or inflammation and atrophy of the renal structure.

3 What are the causes of hydronephrosis?

Lesions, congenital stricture of the ureter, impaction of a calculus in the ureter, abdominal tumors in the urinary passages, inflammatory stricture of the ureter or urethra, displaced uterus pressing upon the ureter, a movable kidney, causing a twist in the ureter, and parasites.

4 What else may cause hydronephrosis?

Prostatitis.

5 How might prostatitis cause hydronephrosis?

By causing urethral stricture.

6 What per cent of cases are due to congenital obstruction?

From twenty to thirty-five per cent.

7 Give the symptoms of hydronephrosis.

Slight distention yields no symptoms. In other cases a tumor slowly develops in the region of the affected kidney; on palpation it is elastic, and perhaps fluctuating; on percussion, dull; and on aspiration it yields a clear fluid, which usually contains urea and uric acid.

8 Give the treatment for hydronephrosis.

Relax the spinal muscles; if there are any lesions correct them; remove the obstruction; if there is a movable kidney it must be raised, and the ureter straightened. Great care must be used in doing this. Reduce the enlarged prostate, replace the prolapsed uterus, dilate the ureter and work the calculus or parasites down out of it. A continuous course of treatment should be given.

9 How may a movable kidney be held in place?

By strengthening its omental support and the abdominal wall.

10 Why should a continuous course of treatment be given?

To overcome the atrophy of the renal epithelium and the growth of connective tissue that has likely taken place.

11 What is the prognosis in hydronephrosis?

Fairly good.



## HYPERTROPHY OF THE HEART.

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1 What is hypertrophy of the heart?

An increase in the muscular structure of the heart, the walls being usually thickened.

2 What is the difference between hypertrophy and hyperplasia?

In hypertrophy the anatomical elements are enlarged, and in hyperplasia they are increased in number.

3 What are the causes of hypertrophy?

Anatomical displacements, valvular lesions, exophthalmic goitre, Bright's disease, palpitation, obstruction to the circulation, lead poisoning and alcoholism.

4 What is often the cause of over activity of the heart?

Lesions to the pneumogastric nerve and the accelerators of the heart.

5 Give the symptoms of hypertrophy.

The symptoms are not always present; when present there is usually headache, precordial discomfort, flushing of the face, uneasiness, sometimes the eye balls are prominent, and there is sometimes tinnitus aurium.

6 What is revealed upon inspection?

Prominence of the precordial region, the apex-beat more forcible than normal, and it may be down as far as the 9th or 10th rib.

7 What is revealed upon auscultation?

The first sound is muffled, dull, prolonged, diffused over a larger area than normal; the second sound is louder and more diffused than it should be.

8 With what is hypertrophy usually associated?

Dilatation of the chambers.

9 What does hypertrophy and dilatation cause when they coexist?

Great enlargement of the heart.

10 What is simple hypertrophy?

Hypertrophy without dilatation.

11 What is eccentric hypertrophy?

Where hypertrophy and dilatation coexist.

12 Which compartment in the heart is most frequently affected?

The left ventricle.

13 Which compartment in the heart is usually least affected?

The right auricle.

14 Give the treatment for hypertrophy of the heart.

Remove the lesion, raise the ribs, free the entire circulation, treat the sympathetics to the heart, keep patient quiet and free from excitement, alcohol, coffee, tea, etc.

15 What is the prognosis?

Favorable.

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## HYSTERIA.

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1 What is hysteria?

A chronic functional disorder characterized by a vast multiplicity of clinical manifestations, all indicative of a loss of voluntary control over inhibitory and active nervous influence.

2 Between what ages in females does hysteria most often occur?

The fifteenth and twenty-fifth.

3 What are the causes of hysteria?

Anatomical displacements, prolonged mental excitement, worry, sorrow, self abuse, anxiety, want of out-door exercise, injuries, lead poisoning, infectious fevers, and excessive use of alcohol and tobacco.

4 Give the symptoms of hysteria-minor.

The patient is very nervous, with hyperæsthesias, pains and cries of an emotional character, marked loss of emotional control, patient yields to impulses, and cries and laughs very easily. When excited the patient may perform acts of which he will be entirely ignorant after the seizure. There are headaches, spinal pains, vasomotor disturbances, and after the crisis, there is usually a large quantity of light colored urine passed.

5 Give the symptoms of hysteria major.

Between the crises the patient may be well, but generally there are characteristic paralysis, contractures, and sensory disturbances. Frequently there are anæsthetic disorders of the special senses, and anæsthesia and hyperæsthesia of the skin and mucous membranes. Anæsthesia is found more frequently upon the left side of the body. There is often an anæsthetic condition of the retina, causing a disturbance in the color sense. Vision may be impaired in both eyes or completely lost in one eye. The sense of taste is usually impaired or abolished. The sense of hearing and smell may be impaired. Hyperaesthesia is usually found in small patches; in women, over

the ovaries; in men, over the corresponding regions and on the scrotum. There are pains along the spine, headaches, constipation, dyspepsia, and sometimes regurgitation of food, or vomiting occurs.

6 Give the symptoms of the crises.

The most common of the paroxysms of hysteria are emotional outbursts of crying or laughing; following this there are motor disturbances, severe pain, attack of nausea and vomiting, there may be prolonged attacks of hysterical coughing, hiccoughing, sneezing and rapid breathing. The hysterical seizure may also take the form of attacks of trance and lethargy. The emotional crises are characterized as appearing without any good cause. In the hysterical convulsion the patient, under the influence of some excitement, suddenly falls and begins to go through various irregular movements of the body, such as rolling around on the floor or bed, throwing the head from side to side, and kicking with the legs; or the patient may fall and lie unconscious for several minutes or more. After an hysterical crisis, the patient may be found to have a paralysis of arms or legs or one side of the body.

7 Give the treatment for hysteria.

First gain the patient's confidence, remove the lesion and causes of irritation, give a course of general treatment to build up the nervous system, free the circulation, give an inhibitive and relaxing spinal and cervical treatment to quiet the nervous system, raise the ribs and spring the spine. The patient should lead a regular life. Remove the patient from his friends. The patient must have rest; the diet must be regulated, consisting mainly of vegetables. Dashing cold water in the patient's face and spanking the patient with a wet towel is often used to a great advantage. Hygiene is an important factor.

8 What is the prognosis?

Very favorable under osteopathic treatment.

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## INFANTILE ECLAMPSIA.

(*Infantile Convulsions.*)

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1 What is infantile eclampsia?

Convulsions in children resembling those of epilepsy.

2 What are the causes of infantile eclampsia?

Anatomical displacements, rickets, fright, organic brain lesions,

teething, gastro-intestinal disorders, infectious diseases, inflammation of the serous membranes, parasites and peripheral irritation.

3 Give the symptoms of infantile eclampsia.

The symptoms of the attack vary according to its intensity. The attack may or may not come on suddenly, the eyes are turned to one side or upward, and the gaze becomes fixed and staring, the muscles of the face twitch, sometimes there is a gnashing of the teeth, the hands are flexed upon the arms; and the fingers are strongly flexed. Often the muscles of the trunk are involved. There is usually foam collected at the mouth, and the patient often bites his tongue. Unconsciousness is nearly always complete, and the urine is often passed involuntarily. There is a very mild form which consists of sudden fixation of the eyes, slight twitching of the body, and a peculiar dusky pallor that passes away in a few moments. Many of the slight attacks are accompanied by a cry. The child usually goes to sleep after the tetanic state.

4 How long does the tetanic state last?

About one, two or three minutes. The spasm is usually ended by a few deep respirations.

5 Give the treatment for infantile eclampsia.

Relax all tissues involved, remove the lesion and all sources of reflex irritation, equalize the circulation, give a strong inhibitive treatment to the superior cervical, splanchnic, and lower lumbar region. Treat the gastro-intestinal affections according to their kind. If there is an over-loaded stomach the patient should be made to vomit. Give a good inhibitive spinal treatment, spring the spine, relax the tissues, and inhibit the nerves, treat the abdomen to equalize the circulation, and give a thorough course of spinal treatments.

6 What is the prognosis?

Good, but must be guarded.

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INFLUENZA.

(*La Grippe, Epidemic Catarrhal Fever.*)

1 What is influenza?

An acute infectious disease, characterized by fever, extreme prostration, pain in the head and back, and generally by catarrh of the respiratory or gastro-intestinal tract.

2 What are the causes of influenza?

Anatomical displacements, exposure to cold and wet, but directly due, presumably, to the bacillus of Pfeiffer.

3 Give the symptoms of influenza.

The disease begins abruptly with chillness, malaise, fever, pain in the head and back. The catarrhal symptoms are congestion of the eyes, hoarseness, sneezing, and hard paroxysmal cough. In simple cases the temperature falls in two or three days by crisis, but complications not infrequently prolong the case for several weeks. The symptoms are similar to the symptoms of bronchitis, except, influenza has higher fever, and severe pains throughout the body, with gastro-intestinal irritation, and profound prostration.

4 What are the diseases often complicated with influenza?

Croupous pneumonia, catarrhal pneumonia, nephritis, pleurisy, neuritis, insanity and meningitis.

5 What are the specific lesions in influenza?

Contracture of the spinal muscles, most marked in the upper dorsal and cervical regions, but affecting the whole spinal system.

6 How may anatomical displacements cause influenza?

By weakening the system in one way or another laying it liable to the invasion of the germ.

7 What is the duration of influenza?

In the mild form it is from two to four days, in the severe form from seven to ten days.

8 Give the treatment for influenza?

Relax all tissues involved; stimulate the heart and lungs, regulate the circulation, raise the ribs and clavicles, treat the chest, stimulate the vaso-motor and accelerator innervation in the upper dorsal regions, keep the liver, bowels, kidneys and skin well stimulated, flex and rotate the thighs, give a careful abdominal treatment, treat the splanchnics, solar and hypogastric plexuses. A general treatment should be given. The patient must be kept from atmospheric changes, and on a light diet. Hygiene is an important factor.

9 What is the prognosis?

Very good, a few treatments being usually all that is necessary in uncomplicated cases.

INSANITY.

1 What is insanity?

Disorder of the mental faculties, more or less permanent in character, but without loss of consciousness and will. It is marked by delusions, illusions, and hallucinations, by changes in character and habits, and by unreasonable and purposeless actions and language.

2 What is the cause of insanity?

Anatomical displacements, which are brought about in various ways.

3 What kind of lesions are usually present?

Bony.

4 Where do these bony lesions most often occur?

In the cervical region, and occasionally in the upper dorsal region.

5 How may a lesion of the atlas cause insanity?

By interfering with the circulation through its close relations to the superior cervical ganglion and the medulla.

6 How may splanchnic, rib, and renal lesions cause insanity?

By interfering with the kidneys, liver and gastro-intestinal tract.

7 What are hallucinations?

The perception of objects, tastes, sounds, and odors, when they do not really exist.

8 What are illusions?

The misinterpretation of the character of an object which is really perceived.

9 What are delusions?

False ideas, and result of disturbances in reasoning.

10 Give the treatment for insanity.

Relax the muscles in the cervical and upper dorsal regions, remove the lesion, give a general spinal and cervical treatment, raise the ribs and clavicles, free the venous flow from the head, inhibit the abdomen, keep the liver, kidneys and bowels active. The patient should live a quiet life.

11 What is the prognosis?

Very good under osteopathic treatment.

INSOMNIA.

1 What is insomnia?

Inability to sleep; abnormal wakefulness.

2 What kind of a disturbance is insomnia?

A vaso-motor disturbance.

3 What are the causes of insomnia?

Anatomical displacements, habit of going without sleep, heart disease, general anaemia, lithaemia, arterial fibrosis, gout, uraemia, syphilis, over use of tobacco, coffee and tea.

4 Give the symptoms of insomnia.

The patient is very restless, excited and irritable. The sleep is superficial, unresting, and interrupted by dreams. Insomnia is usually accompanied by mental and physical disturbances. As a rule the insomniac child is more ill than the insomniac adult. In most cases of insanity, insomnia is characterized by great motor restlessness.

5 How long can a person live without any sleep?

About three weeks.

6 When does sleep reach its deepest stage?

From one to two hours after it begins.

7 Where are the lesions in insomnia usually found?

In the cervical and upper dorsal region.

8 How may a lesion of a cervical vertebra cause insomnia?

By acting upon the sympathetic nerves supplying vaso-motor control to the blood vessels of the neck and head, thus disturbing the circulation to the brain. Insomnia may also be caused by direct pressure of a cervical vertebra upon the vertebral arteries.

9 Give the treatment for insomnia.

Remove the lesion and any cause of irritation to the nervous system, relax all the cervical tissues, inhibit the superior cervical ganglion and along the spine from the occiput to the middle dorsal, raise the ribs and clavicles, stimulate the carotid arteries and jugular veins, open the mouth against resistance, give a deep treatment beneath the ears. When the cerebral vessels are congested, inhibit the abdomen to draw the blood from the head. In anaemic cases, treatment must be given to the stomach, kidneys, spleen, liver and bowels. Stimulate the heart and lungs, give a good general spinal treatment, avoid eating before going to bed. Give the same treatment for bad dreams, night-mare, somnolentia, drowsiness and narcolepsy.

10 What is the prognosis?

Very good under osteopathic treatment.

INTESTINAL OBSTRUCTION.

- 1 Give the definition for intestinal obstruction.
A complete or partial occlusion of the intestinal canal.
- 2 What are the forms of intestinal obstruction?
Acute and chronic.
- 3 To what is the acute form due?
To strangulation, intussusception or volvulus.
- 4 To what is the chronic form due?
To stricture, gall stones, fecal impaction, tumors, etc.
- 5 By what is strangulation produced?
By bands of adhesion.
- 6 In what disease does strangulation occur?
In internal and external hernia.
- 7 What is intussusception?
The descending telescoping of one section of the bowel into another.
- 8 Intussusception is caused by what?
By a circumscribed irregular peristalsis of the intestine.
- 9 Intussusception occurs most frequent in children prior to what age?
Ten.
- 10 Which are most subject to intussusception male or female?
Male.
- 11 What is volvulus?
An obstruction of the bowel due to a twist.
- 12 Where do these twists most often occur?
At the sigmoid flexure of the colon.
- 13 Volvulus occurs about what age?
Middle age.
- 14 Where do the fecal impaction^s most often take place?
At the caecum or sigmoid flexure.
- 15 In what region is the caecum situated?
In the right iliac region.
- 16 In what region is the sigmoid flexure situated?
In the left iliac region.
- 17 The impaction may take place where besides at the caecum and sigmoid flexure?
The hepatic flexure and the splenic flexure.

18 In which is impaction most common, children or adult?

Adult.

19 What kind of tumors obstruct the intestines?

Malignant or benign.

20 The most common tumor in the bowel is what?

A cancer.

21 How is the fever when a tumor is present in the intestine?

Not so high as when there is a complete obstruction.

22 How is stricture brought about?

By scar tissue.

23 What disease does stricture often follow?

Typhoid fever.

24 From what does stricture usually result?

Syphilitic and dysenteric ulcers and tuberculosis.

25 What is a complete obstruction?

The obstruction when there is no passage whatever.

26 Give the symptoms of intestinal obstruction.

There is sudden pain, first paroxysmal, later continuous constipation, vomiting persistent and becoming fecal, cold extremities and feeble pulse. If the obstruction is high up in the small bowel distressing hiccough and eructation may precede the vomiting; the constipation is usually complete and obstinate.

27 What is the cause of intestinal obstruction?

Spinal or rib lesions may be looked to as the original cause.

28 When local treatment fails to open the bowel, what must be done?

Give a rectal injection.

29 What must be used for the injection?

Warm water and glycerine

30 If the injection fails to open the bowel what then is recommended?

A surgical operation.

31 Why is a surgical operation recommended?

To ward off, if possible, an attack of peritonitis.

32 Give the osteopathic treatment for intestinal obstruction.

Strong inhibition must be given along the splanchnic region. from the 9th to the 12th dorsal and along the lumbar region; this eases the pain; then inhibit the solar plexus. A slow, deep, but gentle inhibitive treatment should be given over the bowels to relax tissues, decrease the inflammation and lessen the pain. Deep

treatment may be made in the left and right hypochondriac regions to free the splenic and hepatic flexures. In volvulus, raising and straightening the involved portion is relied upon. The adhesions and strictures may be manipulated with the purpose of softening, relaxing and breaking them down. The practitioner should stay with the case and treat often until the patient is relieved.

33 What may you require your patient to do to assist nature?
To walk around the room on his hands and knees.

34 In what way does this position assist nature?
It aids gravity in righting the parts.

35 What intestinal obstruction is most readily handled by osteopathic treatment?

The foreign bodies and fecal matter.

36 Why do you give spinal treatment?
To relax tissues, lessen the pain, restore nerve tonicity.

37 What must you do in the intervals of treatment?
Apply hot applications over the seat of pain.

38 What must be done after the removal of the obstruction?

A thorough course of general treatments should be given for the removal of lesions that originally caused the abnormal bowel conditions.

39 What is the prognosis?

Very many die in the acute cases. Surgical operations are necessary after the 3d or 4th day of obstruction. Yet osteopathic treatment has been very successful in a number of cases after surgical operation had been urged as the last resort. In the chronic case the prognosis is very favorable. Almost all cases under osteopathic treatment can be prevented from reaching the stage of absolute obstruction.

JAUNDICE.

(*Icterus.*)

1 What is jaundice?

It is a condition in which the bile is absorbed into the circulation and colors the tissues of the body and the secretions.

2 What are the forms of jaundice?

Hepatogenous and hæmatogenous.

3 What is the hepatogenous form?

Obstructive jaundice.

4 What is the hæmatogenous form?

Non-obstructive jaundice.

5 Name lesions and other causes which produce obstructive jaundice.

Any spinal lesion along the splanchnic area, displacement of any of the lower ribs, stricture of the bile duct, catarrh of bile duct, foreign bodies in the bile duct, such as gall stones. Tumors of the liver or of adjacent viscera compressing the bile duct.

6 Name the lesions and other causes which produce non-obstructive jaundice.

Any spinal lesion along the splanchnic area, displacement of the lower ribs, disintegration of the blood or a destruction of the liver substance, the action of some toxic agent, such as snake bites, minerals such as phosphorus, arsenic, etc.

7 Lesions in the splanchnic area interfere with what?

The vaso-motor activity of the gastro-intestinal tract.

8 What does this disturbed vaso-motor activity cause?

It causes an inflamed condition of the mucous membrane of the gastro-duodenal mucosa and of the mucous lining of the ductus communis choledachus.

9 Where is the yellow color first noticed?

In the conjunctivæ.

10 Differentiate between jaundice and the bronze hue of Addison's disease.

In Addison's disease the conjunctivæ are white, and the urine lacks bile.

11 Give the symptoms of obstructive jaundice.

The skin and secretions are stained yellow, the urine is dark green and contains bile, pulse is slow, about 20 to 30 beats per minute, temperature is about 100° to 101° F, itching of the skin, and the stool is light in color.

12 Give the symptoms of non-obstructive jaundice.

They are the same as of obstructive jaundice, except the skin is not so yellow.

13 Describe the treatment for jaundice.

Remove the lesion, locate the mechanical obstruction and remove it by manipulation upon the duct. In catarrhal jaundice you must gain vaso-motor control and relieve inflammation. Inhibit the

splanchnic area to relieve pain. A slow, deep, inhibitive or relaxing treatment is given to the upper intestinal region and ductus communis, stimulate the hepatic and cystic plexuses, treat the kidneys, bowels, and stomach. The diet must be plain, avoiding starchy and fatty foods; give lemonade and water.

14 What is the prognosis?

Very good, acute cases yield almost immediately to osteopathic treatments, but to free the tissues of the pigmentation is rather a slow process.

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**KIDNEY, AMYLOID.**

(*Waxy Kidney.*)

1 What is amyloid kidney?

A degeneration of the kidney, usually coexistent with a similar degeneration of other viscera.

2 What are the causes?

Anatomical displacements, prolonged suppuration, particularly in bone diseases, tuberculosis, syphilis, malarial, cachexia, etc.

3 What is the pathological condition of the kidney?

Large and pale, and on section presents a waxy translucent appearance.

4 What is the specific gravity of the urine?

About 1005-1015.

5 What is amyloid kidney commonly associated with?

Chronic parenchymatous or interstitial nephritis, and with cachetic conditions of the system.

6 Where look for lesions?

From 6th dorsal to 2nd lumbar.

7 Why look here?

Because this is the vaso-motor area of the kidney.

8 What are the symptoms of amyloid kidney?

Loss of flesh and strength, with great pallor and moderate dropsy. Uræmic symptoms are common. Liver and spleen are often enlarged. The urine is usually increased in amount, pale in color, and contains considerable albumin and wide hyaline and granular casts.

9 Give the treatment.

It is the same as that of nephritis.

10 What is the prognosis?

It must be guarded, but generally speaking, it is favorable.



## LARYNGITIS.

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1 What is laryngitis?

A catarrhal inflammation of the mucous membrane lining the larynx, characterized by hoarseness, cough, and painful deglutition.

2 What are the causes of laryngitis?

Anatomical displacements, traumatism, exposure to atmospheric changes. foreign bodies in the larynx, straining of the vocal cords, breathing through the mouth, abuse of stimulants, extension of an attack of coryza, and breathing irritating impurities.

3 Give the symptoms of laryngitis.

The temperature rises rapidly, the face is flushed, slight pain in the throat, the larynx is dry, the cough is at first dry, but soon becomes loose, the voice is hoarse and there is difficulty in swallowing.

4 What are the arteries of the larynx?

The laryngeal branches derived from the superior and inferior thyroid.

5 What are the nerves of the larynx?

The superior and inferior laryngeal branches of the pneumogastric.

6 What are the main lesions in laryngitis?

The upper cervical, interfering with the vagus and cervical sympathetics.

7 How may the blood supply be interfered with directly?

By lesions of first rib, clavicle, anterior cervical tissues and muscles about the throat.

8 Give the treatment for laryngitis.

Relax all tissues involved, remove the lesion, free the blood and nerve supply to the larynx, raise the ribs and clavicles, treat all the neck muscles, treat the vagus and the superior and inferior laryngeal branches. A deep relaxing treatment must be given along the larynx and trachea. The treatment should be given with great care.

9 Where do you treat the superior laryngeal branch?

Behind the superior cornua of the thyroid cartilage.

10 Where do you treat the inferior laryngeal branch?

Inner side of the lower portion of the sterno-mastoid muscle, on a level with the cricoid cartilage.

11 Where do you treat the vagus?

Along the sterno-mastoid muscle.

12 What is the prognosis?

Very favorable.

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## LIVER, AMYLOID.

1 What is amyloid liver?

An enlargement of the liver due to the deposition of an albuminoid substance.

2 What are the causes of amyloid liver?

Anatomical displacements, prolonged suppuration, syphilis, chronic malaria, tuberculosis, etc.

3 Give the symptoms of amyloid liver.

The liver is enlarged, smooth, firm and painless; enlargement of the spleen; the urine is albuminous.

4 What kind of food must be avoided?

Starchy and fatty foods.

5 What kind of food is recommended?

Lean meats and green vegetables.

6 Give the treatment for amyloid liver.

Stimulate the excretions, free the circulation, and give a general course of treatment. Proper diet is an important factor.

7 What is the prognosis?

Very favorable under osteopathic treatment.

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## LOCOMOTOR ATAXIA.

(*Tabes Dorsalis, Posterior Sclerosis.*)

1 What is locomotor ataxia?

A progressive disease, involving primarily the posterior spinal ganglia or analogous neurosis, and later the spinal cord and peripheral nerves; characterized by inco-ordination, anæsthesia, pains and various visceral, trophic and other symptoms; anatomically by a degenerative sclerosis chiefly marked in the posterior columns of

the cord and posterior roots, and to a less extent in the peripheral nerves.

2 What are the main stages of locomotor ataxia?

The initial or pre-ataxic, ataxic and paralytic.

3 What is the pathological condition?

The posterior roots are grayish in color and more or less atrophied; adhesion and thickening of the spinal membranes; there are medullary and cerebral spinal changes; there may be some change in the nuclei of the columns of Goll and Burdach; there is a slight change in the shape of the cord; there are degenerative changes in the posterior, and occasionally in the anterior roots.

4 Give the symptoms of the initial or pre-ataxic stage.

Numbness of the feet, the patient first notices a slight uncertainty in walking, darting pains in the rectum or legs, the patient's sexual function becomes weak, control over the bladder is slightly impaired, sometimes double vision occurs, and loss of knee jerk. These symptoms usually last from a few months to several years.

5 Give the symptoms of the ataxic stage.

The gait becomes so unsteady that others notice it; when patient walks he uses a cane and watches his feet; very difficult for patient to stand with his eyes closed; sharp pains in the legs; a sense of constriction is often felt around the waist; loss of sexual power; the bladder becomes very weak; there is constipation and small pupils. This stage usually lasts several years.

6 Give the symptoms of the paralytic stage.

The patient loses the power of walking, anaesthesia and ataxia are very great, the patient can not feel the prick of a pin, nor can he tell where his legs are when he closes his eyes, the bladder is anaesthetic and parietic, the pains are more or less, the intelligence remains good. The patient may continue bed ridden for years.

7 Which sex is more susceptible to locomotor ataxia?

The male, to the proportion of ten to one.

8 What are the causes of locomotor ataxia?

Anatomical displacements, exposure to cold and wet, syphilis, traumatism, prolonged lactation, sexual excess, railroad traveling, and excessive smoking and use of alcohol.

9 Between what years does locomotor ataxia usually occur?

Between the thirtieth and fortieth years, but it may occur as early as the tenth and as late as the sixtieth year.

10 How would you relieve the lightening pains in the limbs?

By strong inhibition upon the anterior crural nerve in Scarpa's triangle, and on the great sciatic between the great trochanter and the tuberosity and upon the lumbar and sacral portions of the spine.

11 Give the treatment for locomotor ataxia.

Relax spinal tissues, remove the lesion, give a thorough spinal treatment paying much attention to the treatment in the middle dorsal, free the circulation about the spine; treatment must also be given to the upper spine and cervical region; care must be taken in treating the nerve supply to the upper and lower limbs; treat the abdomen, keep the bowels active; hygiene and rest are two important factors. The patient must not worry and should be kept from excitement; diet must be nutritious and easily digested.

12 What is the prognosis?

It is not very favorable as to a cure, but most cases are greatly benefited under osteopathic treatment.

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## MALARIAL FEVER

(*Swamp Fever.*)

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1 What is malarial fever?

A specific, non-contagious disease, invariably excited by the hematozoa of Lazeran, and characterized by splenic enlargement, brief febrile attacks which recur periodically, melanemia, and a tendency in protracted cases to irregular fever and extreme anemia.

2 What are the causes of malarial fever?

Anatomical displacements, moist atmosphere, badly-drained soil and exposure to night air. The exciting cause is the hematazoon of Lazeran.

3 Where do most of the lesions in malaria occur?

Usually along the splanchnic area, but may occur anywhere along the spine from the atlas to the coccyx.

4 What do lesions in the splanchnic area cause?

Disturbance of the sympathetic and vaso-motor innervation of the spleen, liver and kidneys.

5 What are the varieties of malarial fever?

Intermittent fever, pernicious fever, malarial cachexia, and masked intermittent fever.

6 What is intermittent fever?

A form of malarial fever in which the paroxysm has three distinct stages.

7 Name the stages of intermittent fever.

Cold stage, hot stage, and the sweating stage.

8 Give the symptoms of the cold stage.

This stage begins with nausea, malaise, head-ache, and a desire to stretch; soon there is a chill, the patient's lips become blue and the skin pale. This stage is followed by the hot stage.

9 Give the symptoms of the hot stage.

This stage comes on just as the chill leaves, and is marked by a head-ache, intense thirst, nausea and vomiting, high fever, severe pains over the body and in the head. The urine is scanty, and the face is flushed. This stage lasts several hours, and is followed by the sweating stage.

10 Give the symptoms of the sweating stage.

The fever subsides, the pain decreases, a sweat breaks out, and the patient often falls into a refreshing sleep, and awakens feeling fairly well.

11 What is remittent fever?

A form of malarial fever in which the temperature remits, never reaching normal during the continuance of the disease.

12 Give the symptoms of remittent fever.

There is malaise with moderate chilliness, followed by a continuous fever which daily remits. Delirium is sometimes noted, and vomiting often occurs. The spleen is enlarged, the maximum temperature ranges from  $103^{\circ}$  to  $106^{\circ}$ . While this lasts the face is flushed, the pulse is full and rapid, the skin is hot, the eyes are injected, the urine is scanty, and the patient complains of pain in the head and limbs. An examination of the blood reveals hematozoa.

13 What is the duration of remittent fever?

About fourteen days.

14 What is pernicious malarial fever?

A pernicious, malignant form of malaria, which may be of the intermittent or remittent form, occurring principally in the tropics, and having congestion of the internal organs.

15 What are the varieties of pernicious malarial fever?

Comatose, algid, and hemorrhagic,

16 What is the duration of pernicious malarial fever?

About six or eight days.

17 What is malarial cachexia?



A chronic form of malaria, characterized by anemia, and an enlarged spleen.

18 Give the symptoms of malarial cachexia.

The complexion is of a muddy hue or dirty yellow, the patient is thin and pale, fever is often absent, and the spleen is enlarged. Hematuria is often observed, headache and neuralgia are common symptoms. There is great weakness from the attending anemia.

19 Give the treatment for malarial fever.

Relax all tissues involved, remove the lesion, keep the kidneys, liver, spleen and bowels active, stretch the spine, and bring pressure upon the fourth and twelfth dorsal vertebræ. Hold the axillary arteries merely long enough to allow one heart-beat to elapse. A general spinal, cervical, and stimulative treatment to the heart and lungs should be given, which aids in taking down the fever. The more specific treatment may be given in the cervical region upon the chief vaso-motor center of the medulla. The treatment may be given at any time, during or between the paroxysms.

20 What is the prognosis?

Very good. A few treatments are all that are necessary to overcome the difficulty.

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## MEASLES.

(*Morbilli. Rubeola.*)

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1 What is measles?

An acute contagious disease, characterized by an initial coryza, general catarrhal symptoms, fever in the earlier stage, followed by a peculiar papular eruption on the face and body.

2 What are the causes of measles?

The predisposing cause is anatomical displacement. This disease is highly contagious, and the poison may be transmitted through cloths and other forimities. One attack is generally preventive of future infection. The exciting cause is a germ.

3 Give the symptoms of measles.

The attack begins as a severe cold. There is chilliness, discharge from the nose and eyes, headache, and pains throughout the body. During the first day the fever rises rapidly, but remits on the second day for several days, the other symptoms continue.



About the fourth day of the disease, there appears an eruption upon the face, which rapidly spreads over the body. These eruptions are arranged in crescent patches, with healthy skin between them, and are composed of small papules, slightly elevated, with a pale red border. The fever again arises with the appearance of the eruption; the discharges from the respiratory track become thick. After the eruption is out for several days it begins to fade, and desquamates in branny scales. The fever terminates by crisis as the eruption fades. In malignant, hemorrhagic, or black measles the eruption assumes a vesicular form, and becomes hemorrhagic.

4 Where look for bony lesions?

Along the cervical and upper dorsal regions; the clavicles and first ribs are also often displaced.

5 To what is the general congestion due?

Muscular contractures along the spine irritating the spinal distribution of nerves, and through them deranging sympathetic, vaso-motor and lymphatic nerve supply.

6 What may a displaced clavicle "backward at its sternal end" cause?

Cough, by pressure against the pneumogastric nerve.

7 What is the period of incubation?

From seven to fourteen days.

8 What conditions are often complicated with measles?

Ophthalmia, pneumonia, bronchitis and stomach trouble.

9 What is the duration of measles?

From ten to fifteen days.

10 Give the treatment for measles.

Insolate the patient to prevent the disease from spreading. If the rash has not developed, stimulate the cutaneous system, and give a general spinal treatment. Remove the lesion, relax all tissues involved, correct the lymphatic obstruction, treat the heart, lungs, solar plexus, splanchnics, kidneys, liver, and abdominal circulation generally. Raise the ribs and clavicles, give a general cervical and spinal treatment, overcome the catarrhal condition of the respiratory tract, relieve the cough by relaxing the throat tissues, and raising the ribs and clavicles; give frequent sponge baths. The diet must be light and nutritious; the room should be darkened for the sake of the patient's eyes. Hygiene is an important factor. This treatment is also given for variola, varicella and scarlet fever.

11 What is the prognosis?

Very good.

## MIGRAINE.

(*Hemicrania; Sick Headache.*)

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1 What is migraine?

It is a neurosis characterized by severe attacks of headache, often paroxysmal, and usually recurring at certain intervals. Nausea and vomiting may or may not be present.

2 What are the causes of migraine?

Anatomical displacements, constipation, menstrual disorders, dental irritation, eye-strain, gastric disturbances, etc. A great percent of the common headache is caused by constipation.

3 What are the most important lesions in migraine?

Cervical lesions.

4 What might a displaced clavicle interfere with?

The venous flow in the external and internal jugular veins.

5 Name one way in which the atlas may cause migraine.

By direct pressure upon the branches of the sub-occipital nerve.

6 What might sympathetic irritation cause?

Vaso-motor reflex, thus interfering with the circulation.

7 What nerve supplies the dura-mater and the antero-lateral parts of the scalp with sensation?

The trifacial nerve.

8 Where does the pain usually seem to be?

At the peripheral ends of the trifacial nerve.

9 Which sex is most frequently affected?

Female.

10 When does migraine usually begin?

Before the 15th year.

11 When may migraine cease?

In men between the 40th and 50th years, and in women usually at the menopause.

12 Give the symptoms.

Usually the patient can tell when an attack is coming on. The vision may be disturbed. The pain at first is usually unilateral, but may involve the entire cranium. Nausea and vomiting are common factors. Vertigo may be present, unconsciousness may also occur. Rarely are spasmodic movements observed. During an attack the patient may have melancholia or be incapacitated mentally and physically for several days.

13 Give the treatment.

Relax all spinal tissues, remove the lesion, treat from the centre of the forehead outward to the outer part of the eyes, then downward to the angle of the jaw, treat a little along the course of the jugular veins, raise the ribs and clavicles, free the entire circulation, inhibit along the upper four or five cervical vertebræ and apply deep pressure in the sub-occipital fossæ. Treat over the points of the trifacial nerve, inhibit the abdomen and solar plexus. Above all keep the bowels active.

14 How may you get an effect upon the superior cervical ganglion?

By pressure in the sub-occipital fossæ and inhibition of the upper cervical.

15 What is the prognosis?

Very good.

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MYOCARDITIS.

1 What are the forms of myocarditis?

Acute and chronic.

2 What is acute myocarditis?

An inflammation of the heart muscles.

3 What is chronic myocarditis?

An increased growth of fibroid tissue in the heart.

4 What are the causes of the acute form?

Anatomical displacements, extension of inflammation of a pericarditis or an endocarditis to the muscle substance of the heart, Bright's disease, rheumatism, etc.

5 What are the causes of the chronic form?

Anatomical displacements, gout, alcoholism, sclerosis of the coronary arteries, syphilis, rheumatism, etc.

6 What is the pathological condition in the acute form?

The muscle substance soon changes to a grayish color, is soft and swollen. There is a fatty degeneration of the fibres of the muscles, the walls of the heart become weakened, and aneurisms may form.

7 What is the pathological condition in the chronic form?

The heart is enlarged or dilated, the tissue is firm, dense, and of a grayish color.

8 What are the symptoms of myocarditis?

The symptoms are practically negative; there is a rapid, irregular pulse.

9 How long does an attack last?

From a few hours to several days.

10 Give the treatment.

It is the same as that of endocarditis and pericarditis.

11 What is the prognosis?

Unfavorable.

NEPHRITIS,

(*Bright's Disease.*)

1 Give the definition of acute nephritis.

An acute inflammation of the kidneys, involving, more or less, the whole kidney, but especially affecting the epithelium of the tubules and glomeruli.

2 Give the causes of acute nephritis.

Anatomical displacements, exposure to wet and cold, scarlet fever, pregnancy, and poisons which are eliminated through the kidneys.

3 What are the symptoms of acute nephritis?

Swollen eye-lids, moderate fever, dull lumbar pain, nausea and vomiting, dropsy, rapid anæmia; urine scanty, contains albumin, high specific gravity, the sediment contains hyaline, blood, and epithelial casts, free blood, and epithelial cells.

4 How many varieties of acute nephritis?

There are three.

5 Name them.

(1) Acute degeneration of the kidneys, (2) acute exudative nephritis, and (3) acute productive nephritis.

6 Give the definition for chronic nephritis.

A chronic diffuse inflammation of the kidneys, attended with epithelial degeneration, exudation from the blood-vessels, and permanent connective tissue changes in the stroma.

7 What are the causes of chronic nephritis?

Anatomical displacements, secondary to acute nephritis, chronic heart disease, syphilis, gout, diathesis, alcoholism, etc.

8 What are the symptoms of chronic nephritis?

Slow loss of flesh, gastric disturbances are very common, arteries are rigid, the pulse is of high tension, dyspnœa, headache; urine is pale in color, low specific gravity, and contains very little albumin.

9 Which is the most susceptible, male or female?

Male.

10 What is the specific gravity of the urine in the chronic form?
(1005-1010)

11 What is the kidney?

It is a glandular structure whose function is the purification of the blood.

12 Give the nerve supply to the kidney.

It is from the renal plexus, which is formed by filaments from the solar plexus and the least splanchnic nerve.

13 Give the blood supply of the kidney.

The renal artery and renal vein. The surface of the kidney receives small collateral arteries which pass through the fatty capsule from the suprarenal, spermatic and lumbar vessels.

14 What is the color of the kidney?

Purplish brown.

15 Give the dimensions of the kidney.

It is four inches long, two and one half broad, and one and one fourth thick.

16 What is the weight of the kidney?

Four and one half ounces.

17 Where would you treat to gain vaso-motor control?

Treat upon the vaso-motor innervation of the kidney, from the sixth dorsal to the second lumbar.

18 Why do you want to gain vaso-motor control?

To allay inflammation, relieve tension, restore circulation to clear away the debris from the tubules, absorb the exudates, check degenerative or new growths, and rebuild the destroyed renal epithelium.

19 What kind of diet is recommended?

A very light diet, with plenty of pure water.

20 How often should acute nephritis be treated?

Once, twice or three times a day, just as the practitioner thinks best.

21 How often should chronic nephritis be treated?

About three times per week.

22 Give the treatment for nephritis.

Relax the spinal muscles, remove the lesion and inhibit the sensory nerves. Treat the kidneys directly and indirectly. Treat the disease to which it is secondary. To aid the circulation give direct treatment over the kidneys. Give a deep inhibitive treatment over the abdomen; give a general treatment to stimulate the heart and lungs. Inhibit the sub-occipital fossa to tone circulation and relieve blood tension. When stimulating the kidneys lay the patient on his back, and slip your hands beneath the patient's back in the region of the innervation of the kidneys, then stimulate by pressing your fingers deeply into the spinal tissues. Keep the bowels active.

23 Why do you give a deep inhibitive treatment over the abdomen?

To draw the blood from the kidneys.

24 What is the prognosis in the acute form?

Good.

25 What is the prognosis in the chronic form?

Fair.

NEURALGIA.

1 What is neuralgia?

A condition characterized by pain in the course of a nerve or nerves.

2 To what is neuralgia due?

Direct or indirect irritation of a nerve or nerves.

3 What kind of lesions are usually found in neuralgia?

Bony.

4 What are the most common bony lesions found in neuralgia?

Vertebral.

5 How may a luxated vertebra cause neuralgia?

By direct pressure upon the nerve as it emerges from the spinal canal.

6 What is Tic Douloureux?

Spasmodic facial neuralgia.

7 What are the lesions usually found in intercostal neuralgia?

Vertebral, rib, and the spinal and intercostal muscles.

8 Where look for lesions in lumbo-abdominal neuralgia?

Along the lower dorsal and lumbar regions.

9 What lesions often cause neuralgia in the lower limbs?

Lumbar, sacral and innominate lesions.

10 What is the cause of coccygodynia?

Displacement of the coccyx.

11 Between what years does neuralgia most often occur?

Twenty-fifth and fiftieth.

12 In which sex does neuralgia most often occur?

Female.

13 What are the causes of neuralgia?

Anatomical displacements, exposure to cold and wet, endogenous poisons, gout, rheumatism, traumatism, infectious diseases, and chemical, mechanical or thermal irritants.

14 Give the general symptoms of neuralgia.

The attack may be of sudden or slow onset, with or without prodromata. When the latter exist they consist of a sense of uneasiness, perverted sensations, chilliness, and stinging or slight burning pains. The pain may be strictly localized or radiating to neighboring nerves, and may be aggravated by drafts, movements, or mental perturbation. Reflex muscular contraction may be present in proportion to the intensity of sensory irritation. The vaso-motor symptoms manifest themselves in the flushing of the affected part and increased secretions. Trophic disturbances may result in temporary or permanent changes. To the former belong the herpetic and urticarial eruptions, while the latter group includes changes of color, in loss of and over growth of the hair, and various changes in the skin. The general system seldom suffers unless the attacks are severe or prolonged.

15 Give the treatment for neuralgia.

Remove the lesion and any sense of irritation, and relax the contracted muscles about the affected nerve or nerves. If the patient has decayed teeth, attention must be given to them. The removal of the lesion is often sufficient to cure the condition.

16 What is the prognosis?

Very good under osteopathic treatment.

NEURASTHENIA.

1 What is neurasthenia?

A chronic functional nervous disorder which is characterized by an excessive nervous weakness and nervous irritability, so that

the patient is exhausted by slight causes and reacts morbidly to slight irritations.

2 What are the causes of neurasthenia?

Anatomical displacements, diseases which lower the patient's vitality, abuse of stimulants and narcotics, worry, self abuse, traumatism, over work and severe shocks.

3 Give the symptoms of neurasthenia.

The patient complains of a general feeling of mental depression: and life is not the interesting spectacle to him that it formerly was: the patient tires easily and can not do his accustomed work; his sleep is disturbed, and appetite lost; he can not concentrate his mind; headache, palpitation, irritability, and muscular tremors are sometimes present; the vision may be imperfect; vertigo and accelerated pulse are often present.

4 Between what ages does neurasthenia most frequently occur?

The twentieth and fiftieth, but it may occur between the ages of ten and twenty or fifty and seventy.

5 What kind of lesions are most often found in neurasthenia?

Spinal and rib lesions.

6 How may a lesion produce neurasthenia?

By producing an irritation upon the nervous system, reflexly or directly, allowing a leakage of nerve force, and determining the victim of neurasthenia from over use of stimulants, overwork, uterine trouble, traumatism and severe shocks.

7 Give the treatment for neurasthenia.

Relax the spinal tissues, remove the lesion, spring the spine, free the circulation, give a good cervical treatment, increase the nutrition of the nervous system, and upbuild the exhausted centers. The patient must be kept away from cares and trouble and should take daily exercise; keep the kidneys and bowels active, keep the patient free from excitement and from all causes of drain upon the nervous vitality; give a thorough general treatment of the whole body. The diet must be nutritious and easily digested. Hygiene is an important factor; a thorough course of treatment should be given.

8 What is the prognosis?

Very favorable under osteopathic treatment.

OBESITY.

(*Polysarcia, Lipomatosis Universalis.*)

1 What is obesity?

A condition due to an increase of fat in the tissues of the body, sufficiently great to impair function.

2 What are the the causes of obesity?

Anatomical displacements, ingestion of too much fat making food, and over use of alcoholic beverages. The fat may be derived from an excess of albumin, fat, or carbohydrates.

3 What are the most common lesions found in obesity?

Lesions of the first and second ribs, and clavicles, and lesions affecting the innervation of the lymphatic system, liver and pancreas.

4 What may displacement of the first and second ribs and clavicle cause?

Pressure upon and obstruction of the thoracic and right lymphatic duct, where they empty into the innominate or junction of the subclavian and internal jugular veins.

5 What lesions may interfere with the nerve control of the thoracic duct and receptaculum chyli?

Lower rib lesions, and lesions along the splanchnic area of the spine.

6 How many forms of obesity?

Two.

7 Name them.

Plethoric and anemic, which later merge into the hydremic form.

8 Give symptoms of obesity.

Obesity is not accompanied by any bodily symptoms at first. Usually the earliest troublesome symptom is breathlessness on exertion. In anemic subjects the skin is pale, the muscles are flabby and weak, the pulse is small and compressible, and dyspnea, palpitation, inclination to rest often and sleep much, and dizziness are manifested. In the plethoric form the face is red and congested, as are also the mucous membranes. There is an enlargement of the abdominal and thoracic organs, profuse sweating and an increase in uric acid and urates. The pulse is at first strong, gradually slows and weakens, the area of cardiac dullness increases, and the apex beat becomes diffuse. This condition merges into the hydraemic form.

9 What is the specific gravity of the blood in obesity?

From 1060 to 1070.

10 Name some conditions often complicated with obesity.

Cardiac asthma, edema, hernia, pulmonary congestion, Cheyne-Strokes respiration, and anginal attacks.

11 Give the treatment for obesity.

Remove the lesion, keep the heart well stimulated, raise the ribs and clavicles, keep the pancreas and liver active, remove all sources of obstruction to the lymphatics, keep the kidneys well stimulated, give a thorough general muscular and spinal treatment. The patient should take long walks every day, and drink very little water, eat very lightly, and avoid alcoholic drinks, fats, and starches.

12 What is the prognosis?

Fairly good.

OCCUPATION NEUROSES.

1 What are occupation neuroses?

They are conditions in which the performance of certain habitual co-ordinated movements is prevented by the development of cramp, tremor, paralysis or pain. There are several forms, writers' cramp being the commonest.

2 What are the causes of writers' cramp?

Anatomical displacements, excessive writing, writing that is done under strain, heavy writing with sharp steel pens, lead poison, exposure to wet and cold, local injuries, etc.

3 Give the symptoms of writers' cramp.

The onset is usually slow. At first there is a slight stiffness in the fingers, often uncertain movements of the pen when writing, and finally writing becomes impossible. If the patient starts to write there are spasmodic contractions of the fingers and even of the arm; the arm aches, and there is numbness and prickling present. There are muscular cramps in the spastic form. There are severe pain and fatigue when writing, with muscular cramps in the neuralgic form. In the paralytic form the fingers become weak and fatigued, the pen often drops from the fingers, and the arms ache if the patient attempts to continue writing. The patient is often nervous and at times mentally depressed. If the nerves are involved there may be dryness of the skin, local sweating, and cracking of the nails.

SEX

4 Which is most frequently affected?

Male.

5 What is the most susceptible age?

Between twenty-five and forty.

6 What muscles are most often affected?

Those of the thumb and first three fingers.

7 Where do the lesions most often occur?

Between the fourth cervical and fourth dorsal; the clavicles and upper ribs are also often displaced.

8 What must you do to quiet the pain in the arm and shoulder?

Inhibit the plexus at its spinal origin and relax the muscles.

9 Vertigo and insomnia, when present, are doubtless due to what?

Upper spinal lesions.

10 How may upper spinal lesions cause vertigo and insomnia?

By interfering with the blood circulation to the brain.

11 Give the treatment for writers' cramp.

Relax all tissues involved, remove the lesion, free the blood supply to the affected part, treat the arms, stimulate the brachial plexus, treat the brachial artery, give a general treatment to build up the nervous system. The patient must have rest. If the patient must do his own writing, have him get a Mathien's instrument, and use a gold pen.

12 What is the prognosis?

Very favorable.

PALPITATION.

1 What is palpitation?

A rapid action of the heart that is perceptible to the patient, and usually is accompanied by dyspnea and anxiety.

2 What are the causes of palpitation?

Anatomical displacements, excitement, dyspepsia, heart disease, uterine disease, over use of tea, coffee, alcohol, tobacco, etc.

3 What do lesions of the first rib and clavicle cause?

A check of blood in the sub-clavian artery or lessening of the venous flow in the sub-clavian vein.

4 What do lesions of the upper five ribs and lesions in the cervical and upper dorsal region cause?

Irritation to the accelerators of the heart.

5 How may a lesion of the atlas affect the heart?

It may affect it through the superior cervical ganglion and the upper cardiac branch.

6 What may a lesion in the splanchnic area cause?

Vaso-constriction in this area.

7 How long may an attack last?

From a few minutes to several hours.

8 What is the rapidity of the pulse?

About 120 to 160 per minute.

9 Give the treatment.

Remove the lesion, inhibit the accelerators, stimulate the vagus in the neck, give a deep inhibitory treatment to the abdomen. This draws the blood to the abdomen and decreases the arterial tension. Raise the ribs. During an attack quiet the nerve irritation and build up the circulation.

10 What is the prognosis?

Good.

PANCREATITIS.

1 What is pancreatitis?

An inflammation of the pancreas.

2 What are the forms of pancreatitis?

Acute and chronic.

3 Give the varieties of the acute form.

Hemorrhagic, gangrenous, and suppurative.

4 Give the causes of pancreatitis.

Anatomical displacements, alcoholism, obstruction of the duct, syphilis, catarrhal inflammation, dyspepsia, glycosuria, gastro-intestinal disorders.

5 Where do the lesions most commonly occur that cause pancreatitis?

In the lower ribs and lower vertebræ.

6 What kind of a gland is the pancreas?

A tubulo racemose gland.

7 It is similar in structure to what glands?

The salivary glands.

8 Where is the pancreas situated?

In the epigastrium at the level of the second lumbar vertebrae, and behind the stomach.

9 Give the dimensions of the pancreas.

Six inches long, from one-half inch to one inch in thickness.

10 Give the blood supply of the pancreas

The pancreas receives blood from the splenic artery through its pancreatic branches, and from the superior mesenteric and hepatic by the inferior and superior pancreatico-duodenal arteries, which form a loop running around below, and to the right of its head.

11 Give the nerve supply of the pancreas.

The nerves are branches of the solar plexus which accompany the arteries entering the gland.

12 What are the symptoms of the hemorrhagic and gangrenous varieties?

The symptoms of the hemorrhagic and gangrenous varieties are about the same, and consist in severe, deep seated pains in the epigastrium, vomiting, abdominal distention, collapse, constipation, fever, (103 to 104° F). feeble pulse and hiccough.

13 Give the symptoms of the suppurative variety.

Epigastric pains, vomiting, tympanites, chills and hectic fever.

14 Give the symptoms of chronic pancreatitis.

Epigastric pains, faintness, great anxiety, diarrhoea, dyspepsia, slight jaundice some times, stools are of a light color and contain free fat.

15 Give the treatment for pancreatitis.

Remove the lesion, stimulate and inhibit along the lower spine, give a direct treatment by deep manipulation in the median plane of the abdomen midway between the ensiform and the umbilicus, remove any obstructions. When giving the local treatment over the pancreas the stomach must be empty. Raise the ribs and treat the conditions to which pancreatitis is secondary.

16 What is the prognosis in pancreatitis?

Unfavorable.

PARALYSIS

1 What is paralysis?

A loss of motion or sensation in a living part or member.

2 What is myelitis?

An inflammation of the spinal cord.

3 What are the causes?

Anatomical displacements, exposure to cold and wet, traumatism, syphilis, extension from neighboring organs, infective fevers and strains.

4 What is the pathological condition?

Hyperæmia followed by inflammation of the substance of the cord; the parts become soft from serous exudation, and red from blood extravasation. The nerve elements undergo degeneration.

5 Give the symptoms.

The onset is ushered in by a chill, fever and motor disturbances; there are pains in the back and limbs, the limbs feel heavy, there is a sensation of formication followed by anæsthesia; finally paralysis sets in with wasting of the paralyzed muscles. The sphincters of the bowels and bladder are implicated; the urine is often ammoniacal, and the skin is dry and harsh.

6 What is acute ascending paralysis?

A motor paralysis, beginning in the lower limbs and rapidly extending to the arms and body; there is no atrophy or loss of sensation.

7 What is paralysis agitans?

A chronic disease characterized by a tremor, by a peculiar character of the speech and gait, and by a progressive, but very seldom complete, loss of power.

8 What is infantile spinal paralysis?

An inflammation of the anterior horns of the gray matter of the cord, occurring usually in children, and characterized by fever, and paralysis with atrophy.

9 What is bulbar paralysis?

A degeneration of the motor nuclei of the medulla oblongata, usually secondary, causing paralysis of the muscles of the pharynx, larynx, lips and tongue.

10 Name a few lesions that are often found in paralysis.

Atlas, axis, cervical, upper, middle and lower dorsal, lumbar, innominate, coccyx, hip, shoulder and rib.

11 What lesion is often the cause of paralysis of the lower extremities?

Innominate.

12 What is the most important single lesion?

Atlas.

13 Where look for lesions in facial paralysis?

Along the upper cervical region.

14 What may contracture of the hyoid muscles cause?

Paralysis of the laryngeal muscles by drawing the hyoid bone against the pneumogastric nerve.

15 Give the treatment for paralysis.

Relax all spinal tissues, remove the lesion, free the circulation, give a good treatment to the kidneys, liver, stomach and bowels, break up the spine and stimulate the sympathetics having control of the circulation to the spine. If there is a blood-clot upon the brain, absorb it by increasing the cervical circulation. Give a local treatment to the paralyzed limbs or part to build up circulation, soften contractures, tone the local nerve-mechanism and increase nutrition of the tissues. The patient must not lie upon his back in cases of hemorrhage into the spinal membranes, spinal cord or into the medulla or pons. In cerebral hemorrhage or cerebral apoplexy give a strong inhibitive treatment to the sub-occipital region, which dilates the blood-vessels and aids in reducing the congestion. Almost the same plan of treatment will apply to the various other forms of paralysis.

16 What is the prognosis?

Very good under osteopathic treatment.

PARALYSIS AGITANS.

(*Shaking Palsy; Parkinson's Disease.*)

1 What is paralysis agitans?

A chronic disease characterized by a tremor, by a peculiar character of the speech and gait, and by a progressive, but very seldom complete loss of power.

2 What are the forms of paralysis agitans?

Hemiplegic or monoplegic, right type and retrocolic type.

3 Paralysis agitans develops in the large majority of cases between what years?

The fortieth and sixtieth years.

4 In which sex does paralysis agitans most often occur?

Male.

5 Among what races does paralysis agitans most often occur?

The Irish, German and Polish races.

6 What are the causes of paralysis agitans?

Anatomical displacements, mental strain, injury, worry, rheumatism, fright, and exposure to atmospheric changes.

7 Give the symptoms of paralysis agitans.

The disease is usually ushered in with an acute illness, aching pains in the arms and a slight tremor in the fingers of one hand. This gradually extends and involves the foot of the same side. Soon the other side becomes affected. There is a general contracting and shortening of all the flexor groups, the knees are slightly bent, the gait is slow, the speech becomes affected, muscular weakness, sensory and vaso-motor disturbances, and the head and body are bent forward.

8 Where do the most important lesions occur?

In the cervical and upper dorsal region, also in the upper ribs.

9 Give the treatment for paralysis agitans.

Relax the spinal and cervical tissues, remove the lesion, give a general spinal treatment, treat the nerve plexuses supplying the upper and lower limbs, relax all contracted muscles, keep the liver, kidneys and bowels active, the diet must be nutritious, tepid baths and light exercise may be taken to a great advantage.

10 What is the prognosis?

Fairly good under osteopathic treatment. The patients are greatly benefitted and several cases have been cured.

PAROTITIS.

(*Mumps; Epidemic Parotitis; Parotiditis.*)

1 What is parotitis?

An acute inflammation of one or both parotid glands.

2 What is the common name for parotitis?

Mumps.

3 What are the causes of parotitis?

Lesions in the cervical region, contagion, and poison in the saliva.

4 What is the pathological condition in parotitis?

The parotid glands are inflamed and infiltrated, suppuration may occur. The disease may be transferred to the testes and mammae.

5 Give the symptoms of parotitis.

The invasion is marked by chilliness, fever, pain and stiffness of the jaws. The gland swells and often fills the depression beneath the ear; chewing and swallowing are painful, the skin over the gland is dull red in color, difficult hearing, etc.

6 Give the blood supply of the parotid gland.

The blood supply is from the posterior auricular artery and branches of those in the substance of the gland.

7 Give the nerve supply of the parotid gland.

The nerve supply is derived from the facial, great auricular, auriculo-temporal and carotid plexus.

8 Give the treatment for parotitis.

Relax all tissues involved, remove the lesion, free the blood and nerve supply to the testes and mammae, because the disease may be transferred to these parts, free the general circulation, keep the patient in bed with good hygienic surroundings and away from those who have not had the mumps; give a good relaxing treatment over the gland; raise the ribs and clavicles; keep the kidneys and bowels active; the diet must be light and nutritious.

9 What is the duration of parotitis?

From three to five days under osteopathic treatment.

10 What is the prognosis?

Very good.

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PERICARDITIS.

1 What is pericarditis?

It is an inflammation of the serous covering of the heart.

2 What are the varieties?

Plastic, sero-fibrinous, purulent, hemorrhagic, and adhesive.

3 What is the pathological condition in the acute plastic or fibrinous pericarditis?

At the onset the membrane is smooth, swollen and injected; later it presents a grayish, roughened appearance.

4 What is the pathological condition in the sero-fibrinous or sub-acute pericarditis?

The anatomic changes are grouped in three stages: (a) being characterized by a plastic exudation, (b) by a variable amount of effusion composed largely of serum, (c) the stage of absorption in the most favorable cases.

5 What are the causes of pericarditis?

Irritative rib lesions, spinal lesions, displaced clavicle, injuries to chest wall, aneextension of an inflammation from surrounding organs.

6 What ribs are most often displaced?

The 4th and 5th ribs on the left side.

7 What does a displaced first rib and clavicle prevent?

It prevents the venous drainage of the pericardium.

8 Spinal lesions to the cardiac nerves weaken the tissues and lay them liable to the effect of such disorders as what?

Influenza, gout, scarlatina, rheumatism, etc.

9 What are the symptoms?

In idiopathic pericarditis there is fever, chills, nausea, vomiting and pain. When secondary, the symptoms are not so marked at the onset, but there is pain in the praecordial region, fever, dyspnoea, and dry cough.

10 What is hydropericardium?

It is a condition in which a serous fluid transudate occupies the pericardial sac, but no inflammation occurs.

11 With what is hydropericardium commonly associated?

Renal or cardiac dropsy.

12 What is the nerve supply to the heart?

The cardiac plexus, formed by the pneumogastric and sympathetic nerves.

13 What is the blood supply to the heart?

The coronary arteries.

14 Where is the apex of the heart felt?

Between the 5th and 6th costal cartilages on the left side.

15 There are nerve cells buried in the substance of the heart known as what?

Intrinsic ganglia.

16 What is the function of the intrinsic ganglia?

They keep the heart beating.

17 What is the function of the vagus and sympathetics?

They control the rate and force of the heart.

18 What diseases does pericarditis often follow?

Scarlet fever, Bright's disease, smallpox, typhoid fever and rheumatism.

19 Give the treatment.

Keep the patient quiet and in the recumbent position. Inhibit the accelerators, stimulate the pneumogastric; while the spinal treatment is being had, the left arm is held above and behind the patient's head. Raise the ribs, remove the lesion, inhibit the abdomen, and along the splanchnic area of the spine, relax the intercostal muscles. In the intervals between treatments the ice bag may be applied to allay inflammation. Inhibit the phrenic and sensory nerves to the heart. Free the entire circulation.

20 Why should the patient be kept lying down?

So as to aid in slowing the beat of the heart.

21 Where do you inhibit the accelerators along the spine?

From the 6th cervical to the 5th dorsal.

22 What is the object in raising the ribs?

It frees the venous circulation through the internal mammary veins, which drain the anterior intercostal veins.

23 What must be done to aid in allaying the inflammation?

Raise the ribs and give an inhibitive abdominal treatment.

24 Why do you inhibit the phrenic nerve?

To relax the diaphragm and pericardium.

25 What are the sensory nerves to the heart?

The 1-2-3rd dorsal.

26 What nerves convey sensory impressions from the heart?

The 4-5-6th dorsal. (Hazzard)

27 How is the dyspnea relieved?

By raising the ribs, allaying the inflammation, and quieting the heart.

28 What kind of diet is recommended?

A light diet, broths, milk, etc.

29 What is the prognosis?

Good in the plastic and sero-fibrinous forms, but in the other forms it is unfavorable, though the patient may be benefited.

PERITONITIS.

1 What is peritonitis?

An inflammation of the peritoneum.

2 What are the forms according to cause?

Primary and secondary.

3 What are the forms according to extent?

Local and general.

4 What are the forms according to time?

Acute and chronic.

5 What are the forms according to exudate?

Sero-fibrinous, fibrinous and purulent.

6 Give the causes of the acute form.

Any abnormal condition along the spine or ribs from the 7th dorsal down, also idiopathic, traumatic and perforative causes.

7 What are often the causes of the chronic form?

Abnormal condition of ribs and spine, tuberculous, cancers, syphilis, etc.

8 Does the chronic form follow the acute form?

Very rarely.

9 In the first stage how is the membrane?

Red, sticky and lustreless.

10 How is it later?

Sero-fibrinous or purulent.

11 What does inspection reveal?

Great abdominal distension, etc.

12 What is detected upon palpation?

Extreme tenderness in the vicinity of the umbilicus, and rigidity of abdominal wall.

13 What is detected upon percussion?

There is an exaggerated tympanitic note; absence of liver dullness in the mammary line; fluid effusions are usually detectable in sthenic cases. If the effusion is considerable in quantity, there is dullness on percussion over the most dependent parts.

14 How long does the acute case run?

Just a few days.

15 Peritonitis is secondary to what diseases?

Ulceration of the duodenum typhoid fever, inflammatory diseases of adjacent viscera, and of general morbid process, such as rheumatism.

16 Where would you look for the most common anatomical lesions in peritonitis?

In the splanchnic and lumbar areas, and the lower ribs.

17 Give the symptoms of the acute form.

Moderate fever, (102° to 103° F.), a wiry pulse, chills, abdominal pain, hiccough, vomiting persistent, constipation, and legs flexed.

18 Give the symptoms of the chronic form.

Fever is slight, pain not severe, anemia and emaciation may be marked.

19 To ease the pain where would you treat?

From the ninth to the twelfth dorsal.

20 Why would you treat from the ninth to the twelfth dorsal?

Because the sensory fibres are derived from this region.

21 What part of the peritoneum does the sympathetic nerve supply?

The visceral wall and substance.

22 What is the peritoneum?

An enclosed serous sack.

23 What is the nerve supply to the parietal peritoneum?

The lower intercostals and upper lumbar nerves.

24 These nerves supply what muscles?

Muscles of the abdominal wall.

25 From what is the blood supply to the peritoneum derived?

The cœliac axis.

26 Through what arteries?

Hepatic and splenic arteries.

27 Give the treatment for peritonitis.

Correct the lesions as soon as possible; the treatment must be both abdominal and spinal; relax all spinal tissues, treat the vasomotors to reduce the inflammation. Inhibition should be made along the splanchnic and upper lumbar regions; stimulate the kidneys, liver, lungs and heart. When hiccough is present treat the phrenic nerve, check peristalsis, keep the patient in bed, give a liquid diet, small amount at a time. The patient should be seen every four or five hours.

28 What is the prognosis?

Very good under osteopathic treatment

PHARYNGITIS.

1 What are the principal forms of pharyngitis?

Acute, membranous and chronic.

2 What is acute pharyngitis?

It is an acute catarrhal inflammation of a part or all of the mucous membrane of pharynx.

3 What is membranous pharyngitis?

It is an acute inflammation of the mucous membrane of the pharynx, characterized by the formation of a whitish false membrane.

4 What is chronic pharyngitis?

It is a chronic inflammation of the mucous membrane of the pharynx with hypertrophic or an atrophic involvement of the follicles.

5 What are the varieties of chronic pharyngitis?

Chronic naso-pharyngeal catarrh, chronic hypertrophic pharyngitis and follicular pharyngitis.

6 What are the causes of pharyngitis?

Anatomical displacements, irritation to the mucous membrane, exposure to cold and wet, gout, exposure to infectious diseases, etc.

7 What is the pathological condition?

The mucous membrane is red and swollen, and is coated; there is swelling of the mucous glands into little glistening nodules in the follicular variety. The uvula is enlarged, and the calibre of the pharynx is lessened. Later, there is a discharge of a tenacious mucus.

8 Give the symptoms of pharyngitis.

Chilliness, slight fever, dryness and tickling of the throat, usually pain in swallowing, headache, hacking cough, and the posterior pillars of the fauces and soft palate are reddened and swollen.

PLEURISY.

(*Pleuritis.*)

1 What is pleurisy?

It is an inflammation of a part or the whole of one or both pleurae; it may be either acute, sub-acute or chronic.

2 What are the varieties?

Acute or dry pleurisy, sero-fibrinous pleurisy, purulent pleurisy and adhesive pleurisy.

3 What are the causes of pleurisy?

Anatomical displacements, exposure to atmospheric changes, traumatism and tuberculosis. Pleurisy may appear as a complication in Bright's disease, chronic alcoholism, etc. One attack makes the patient more susceptible to a second attack.

4 What is the pathological condition?

In dry pleurisy the membrane becomes red, swollen and rough; there is a fibrinous exudate. In fibrinous pleurisy the exudate is profuse and forms into firm fibrinous bands. In adhesive pleurisy the pleural surface becomes united. Pleurisy with effusion is where the exudate gravitates to the most dependent portion of the pleural cavity. In empyema the exudate is of a greenish yellow color. In hemorrhagic pleurisy the blood is mixed with a greenish yellow exudate.

5 Give the symptoms of acute or dry pleurisy.

Chilliness, slight fever, the patient leans toward the affected side, the face is pale and anxious, the cough is usually dry, the respiration is jerking, sharp stitch in the affected side, the pulse is usually from 88 to 118 beats per minute, and the pain is increased by inspiration.

6 Give the symptoms of pleurisy with effusion.

The onset is usually insidious, there is a stitch-like pain in the side, dyspnoea, cough may be present, the patient's face is pale and wears an anxious expression, loss of appetite, weakness, headache, pulse beat is about 100 per minute, the urine is diminished, and the specific gravity is increased.

7 Give the symptoms of adhesive pleurisy.

Dyspnoea, dull pain in affected side, dry hacking cough and recurrent bronchial hemorrhages.

8 Give the symptoms of suppurative pleurisy.

Chilliness, temperature rapidly rises, pain in affected side, severe dyspnoea, cough, the fever assumes a hectic form, profuse sweating, the patient grows pale and weak.

9 How may the effusion find an exit?

By getting into the lungs, the peritoneal cavity, the stomach, the intestinal or canal, the esophagus. The pus may burrow its way out behind the psoas muscle and form a lumbar abscess.

10 What is revealed upon inspection?

The movements of the chest wall are very much restricted on the affected side; if effusion takes place there is bulging of the intercostal spaces.

- 11 What is revealed upon percussion?
If there is a little effusion there will be a dullness, but if the effusion be large there will be complete flatness.
- 12 From what are the arteries of the pleura derived?
They are derived from the intercostal and internal mammary, the thymic, pericardiac, musculo-phrenic and bronchial.
- 13 From what are the nerves of the pleura derived?
They are derived from the phrenic and sympathetic.
- 14 What is the difference between the right and left pleura?
The right sac is wider, shorter, and reaches higher into the neck than the left.
- 15 Upon what do we base our diagnosis?
The symptoms and physical signs.
- 16 How often should treatment be given?
In the acute form treatment must be given daily, in the chronic form three times per week is sufficient.
- 17 Give the treatment for pleurisy.
The patient must be handled with great care; relax the spinal and intercostal tissue, remove the lesion, raise the ribs and clavicle, gain control of the circulation, stimulate the heart and lungs, free the general circulation, keep the kidneys and bowels active. The diet must be light and nutritious.
- 18 What is the prognosis?
It is very favorable under osteopathic treatment.

PNEUMONIA.

- 1 What is lobar pneumonia?
An acute inflammation of the parenchyma of the lungs.
- 2 What is lobar pneumonia characterized by?
An exudate of coagulable lymph into the air vesicles, thus rendering them impervious to air.
- 3 What is lobular pneumonia?
An inflammation of the capillary air tubes, extending into the lung tissue proper.
- 4 What is interstitial pneumonia?
A chronic fibroid induration of the lung.
- 5 What are the causes of lobar pneumonia?
Anatomical displacements, alcoholism, exposure to atmospheric

changes, or any thing in which the vitality is lowered.

6 Where are the lesions usually found?

In the upper spinal, thoracic, and cervical regions.

7 How many stages are there?

Three.

8 Name them.

(1) The stage of hyperæmia or engorgement; (2) the stage of red hepatization or exudation; (3) the stage of gray hepatization or resolution.

9 What is the condition of the lung in the first stage?

Distended, firm, air vesicles are usually filled with epithelial cells, the weight is increased; when the thoracic cavity is opened it does not collapse, and is dark brown in color.

10 What is the duration of the first stage?

About three or four days.

11 What is the condition of the lung in the second stage?

Solid, airless, coagulated lymph in the air vesicles, sinks in water, very much swollen, and is dark red in color.

12 What is the duration of the second stage?

From three to ten days.

13 What is the condition of the lung in the third stage?

The solid parts usually become a pulp, which is absorbed in favorable cases. Different parts become gray in color; it is very much mottled.

14 What is the duration of the third stage?

From five to twenty days.

15 Instead of the favorable terminations in resolution and absorption what may result?

Abscess, gangrene and purulent infiltration.

16 What are the symptoms?

The onset is usually marked by a chill, rapid pulse, temperature gradually rises, and often reaches 106° F; dyspnœa, pain beneath the nipple on affected side, cough, headache; the urine is scanty and highly colored with increase in urea and uric acid; the cough at first is very dry, and in from three to five days the expectoration changes to a tough, tenacious mucus.

17 What does obstruction to the recurrent laryngeal nerves cause?

Catarrhal inflammation of the air tubes.

18 What may obstruct the recurrent laryngeal nerves?

Luxations of the first and second ribs.

19 What is the nerve supply to the lungs?

The anterior and posterior pulmonary plexuses. They are formed chiefly from the vagus and sympathetics.

20 What is the weight of the lungs?

Forty-two ounces; the left weighs 20 ounces and the right twenty-two ounces.

21 About how many square feet does the respiratory surface cover?

About 870.

22 Which sex is most susceptible to pneumonia?

Male.

23 Give the treatment.

Relax the muscles along the spine, remove the lesion, treat the kidneys and bowels, relax all the cervical tissues, raise the clavicle and depress the first rib, treat along the vagus and recurrent laryngeal nerves near the sterno-mastoid muscle. For the fever treat the sub-occipital fossæ, also inhibit the abdomen, stimulate the vaso-motor centers to the lungs, raise the lower ribs and stimulate the accelerators of the heart. To ease the cough treat the larynx and trachea. Treatment should be had about once a day.

24 What is the prognosis?

Good.

PULMONARY EDEMA.

1 What is pulmonary edema?

A serous exudation into the air vesicles, and interstitial tissues of the lung.

2 What are the forms of pulmonary edema?

Collateral edema and general pulmonary edema.

3 What is the pathological condition?

The edema may be in both lungs or a portion of one lung; the lung weight is increased. Upon section the lung exudates a frothy serum.

4 What are the causes of pulmonary edema?

Anatomical displacements, alcoholism, congestion of the lungs, increased heart action, inhaling irritative atmosphere, etc.

5 Give the symptoms.

There is usually sudden dyspnoea, retching cough, the expectorations are frothy and usually streaked with blood; the pulse is accelerated and feeble, the extremities are usually bluish and cold.

6 What is revealed upon percussion?

Dullness over the seat of the edema.

7 What is revealed upon auscultation?

Bubbling rales and feeble respiratory murmur.

8 What is revealed upon inspection?

Evidence of severe dyspnoea and respiratory motions decreased.

9 Edema is generally secondary to what diseases?

To heart, lung and kidney diseases.

10 A lesion to the vagus nerve may interfere with what?

Muscular motion in the lungs.

11 What are the most common lesions?

Lesions to the vaso-motor area of the lungs and displaced clavicles and ribs.

12 Give the treatment.

Remove the lesion, free the circulation through the lungs, keep the skin, kidneys and bowels active, stimulate the heart and lungs, call the congested blood from the lungs, relax the intercostal muscles, raise the ribs and clavicles, and give a general treatment to keep the general circulation active.

13 What is the prognosis?

Usually favorable, but must be guarded.

PULMÓNARY TUBERCULOSIS.

1 What is pulmonary tuberculosis?

A destructive disease of the lung tissue, characterized by the presence of the bacillus tuberculosis.

2 What are the varieties of pulmonary consumption or pulmonary tuberculosis?

(1) Acute pneumonic phthisis, (2) chronic ulcerative phthisis, (3) fibroid phthisis.

3 Give the symptoms of the acute pneumonic phthisis.

The disease usually starts like pneumonia, which runs its course up to the time of the crisis, when the patient becomes worse and loses strength. There is dyspnoea, the temperature is irregular, night sweats and the cough is accompanied with profuse muco-

purulent expectorations. The expectorations are usually streaked with blood.

4 What will microscopical examination of the sputum in acute pneumonic phthisis show?

Elastic fibres and tubercle bacilli.

5 What is the pathological condition in chronic tuberculosis? Of tubercles we find both the nodular and infiltrating form. The tubercles are usually found at first in the upper lobe of the lung, but soon extend downward.

6 Give the symptoms of chronic tuberculosis.

Anæmia, pain in the chest, slow fever, pulse increased, dyspnoea, edema of the feet, night sweats, failing circulation, dry cough and hæmoptysis. The cough soon becomes loose and the expectorations are muco-purulent.

7 What is often associated with chronic tuberculosis?

Chronic plurisy.

8 Examination of the expectoration under a microscope show what?

Elastic fibres and bacilli.

9 What is revealed upon auscultation in chronic phthisis?

Prolonged expiration, harshness of respiration, rales, clogged-wheel breathing and feebleness of the respiratory sounds.

10 What is the duration of fibroid phthisis?

It varies from five to twenty-five or thirty years.

11 What are the causes of pulmonary tuberculosis?

Anatomical displacements, bad hygienic surrounding, indoor life, and certain occupations are predisposing. The exciting cause is the bacillus tuberculosis.

12 When and by whom was the bacillus tuberculosis discovered?

It was discovered in 1882 by Koch.

13 What are some of the lesions often found in pulmonary tuberculosis?

Lesions of the upper eight or nine ribs, clavicles and upper cervical and dorsal vertebræ.

14 Where is the vaso-motor spinal area of the lungs?

From the second to the seventh dorsal.

15 How may a lesion produce pulmonary tuberculosis?

By interfering with the normal blood and nerve supply to the lung tissue, thus weakening the lung tissue and making it susceptible to bacteria. This bacteria cannot develop in healthy tissue.

16 How often should the osteopath treat pulmonary tuberculosis?

He should treat the acute form every day and the chronic form two or three times per week.

17 Give the treatment for pulmonary tuberculosis.

Relax the spinal tissues, remove the lesion, give a good spinal treatment, raise the ribs and clavicles, keep the kidneys and bowels active, stimulate the heart and lungs, increase the general circulation, build up the blood supply to the lungs so the bacteria can not develop. The patient must have plenty of fresh air and take exercise, (use discretion in exercise), the diet must be nutritious. Hygiene is an important factor.

18 What is the prognosis?

The prognosis for recovery must be guarded, although many cases have been cured under osteopathic treatment.

RENAL CALCULI,

(*Nephrolithiasis*)

1 What is renal calculus?

A condition characterized by the formation of fine or coarse concretions in the kidney-substance or in the renal pelvis by the precipitation of certain of the solid urinary constituents.

2 What are the varieties of renal concretions according to their size?

Renal sand, renal gravel, renal stone or calculus.

3 What are the varieties of renal concretions according to their composition?

Uric-acid, calcium-oxlate, phosphate.

4 Of what are renal stones composed?

Cystin, xanthin, carbonate of lime, fatty matter, indigo, fibrin, etc.

5 Which are more susceptible, men or women?

Men.

6 Upon what do we make our diagnosis?

The symptoms.

7 What are the causes?

Lesions along the kidney area, and lower ribs, or any habit of the system that encourages the precipitation of insoluble abnormal ingredients or of normal ingredients in excess, which results in chemical changes in the urine, tends to the formation of calculi.

8 What are the symptoms?

Sudden onset, with sharp pains, starting in the back and radiating down the ureter into the pelvis, testicle or thigh. There may be retraction of the testicle on the affected side, cold sweats, weak pulse, and reflex vomiting. Urine may contain pus, blood, and desquamated pelvic epithelium.

9 How long does an acute attack last?

It may last from a few moments to several hours.

10 What are the most frequent lesions?

Lesions found from the 10th dorsal to the 1st lumbar, also the lower ribs.

11 What are the necessary conditions for the formation of a uric-acid calculus?

A highly-acid urine, an excess of uric acid, a low percentage of salines, and lack of normal urine coloring matter.

12 What is the primary cause of a calculus formation?

The presence of some substance in the urinary tract.

13 Name some of these substances.

Mucus, blood-clots, epithelial shreds, tube casts, etc.

14 How do these form a calculus?

They afford a nucleus about which the crystals deposit and adhere.

15 When a stone is passing through the ureter with pain what do we call it?

Renal colic.

16 If the calculus obstructs the ureter, what may it produce?

Hydro-nephrosis.

17 It is believed that the secretion of the supra-renal bodies does what?

Prevents renal calculi.

18 What is the object of the treatment?

To remove the stone and correct the metabolism of the kidney to prevent the formation of other stones.

19 Give the treatment.

Relax the spinal muscles, remove the lesions, inhibit along the kidney area, correct the nerve and blood supply. This is to be done by both spinal and abdominal treatment, and as a result normal urine is secreted which dissolves the stone, if the stone is not insoluble. This will also prevent further formation of calculi. The stone may also be removed by manipulation of it along the course of the ureter down to the bladder. To ease the pain, relax the tis-

sues of the ureter. This is done by a deep, firm treatment along the ureter; this also relaxes the ureter for the passage of the stone. Treatment should be kept up if possible until the stone is passed. The patient, after the passage of the stone, should have a course of general treatment and should not drink alcohol, and must avoid drinks, favoring uric-acid. Keep the kidneys flushed and free by drinking plenty of pure water.

20 What is the prognosis?

Very good for the prevention of further formation and also for the removal of the stone.

RENAL DROPSY.

1 What is renal dropsy?

An abnormal accumulation of watery fluid transuded from the blood vessels into the cellular tissues and lymph spaces.

2 It is a common occurrence in what diseases?

In acute and chronic nephritis, and other forms of kidney disease.

3 What is the rationale of its development in nephritis?

The renal secretion consists principally of water and in most forms of nephritis the urine is diminished, etc.

4 What was formerly believed?

That the dropsy was due to the saturation of the tissues with the water that was not excreted by the kidneys.

5 In all forms of chronic nephritis the dropsy may be due in part to what?

The venous stasis of cardiac incompetency.

6 What are the physical signs?

Puffiness of the skin of the face, and especially of the eyelids. Later, the limbs and the lower part of the back become swollen, the skin has a peculiar waxy pallor and a glossy appearance.

7 Where look for lesions?

Along the kidney area of the spine.

8 In giving the treatment what must you do first?

Relax spinal muscles, remove the lesion, and cure the primary disease of the bladder.

9 Give the treatment.

Stimulate the kidneys and the heart; any disease of the heart present should be given attention; lesions affecting the heart must be removed. An important effect is gotten upon the heart by a

thorough treatment to the kidneys. This lessens the vascular tension in the system due to the kidney disease. Give a general treatment to increase the activity of the circulation, and restore the tonicity to the tissues and vessels.

10 What is the prognosis?

Good. The condition yields quickly to osteopathic treatment.

RHEUMATISM.

1 What is rheumatism?

A constitutional disease marked by inflammation of the connective tissue structures of the body, especially the muscles and joints; and attended by pain in the joints or muscles.

2 Name three forms of rheumatism.

Acute articular rheumatism, chronic articular rheumatism and muscular rheumatism.

3 What is acute articular rheumatism?

A form of rheumatism attended with fever, sour sweat, scanty, high colored urine containing a large amount of urea, and swelling of the joints from exudation into their cavities and infiltration around them. The symptoms pass from one joint to another, and recurrence is apt to take place.

4 What else is acute articular rheumatism called?

Inflammatory rheumatism, acute rheumatic arthritis and rheumatic fever.

5 What is chronic articular rheumatism?

A form of chronic joint inflammation attended by moderate pain, and producing progressive deformity by a combined hypertrophy and atrophy of cartilage and bone and nodular ossification of the soft structures.

6 What else is chronic articular rheumatism called?

Rheumatoid arthritis, arthritis deformans, osteoarthritis, and chronic rheumatism.

7 What is muscular rheumatism?

A painful affection of the voluntary muscles and their fibrous structures. It may or may not be attended with constitutional symptoms.

8 What are the causes of rheumatism?

Anatomical displacements, exposure to abrupt changes of temperature, septic wounds, physical strains, conditions of ill health, particularly digestive and hepatic disturbances, seem to exert a slight yet decisive effect. Occupation is of primary importance, especially if it entail oft-repeated or prolonged exposure to the influence of wet and cold or to severe changes of temperature.

9 Give the symptoms of acute articular rheumatism.

The invasion is usually abrupt with fever and synovitis, affecting one or several joints. A chill may accompany or precede the rise of temperature. The involved joints are red, swollen and tender, and exhibit the local signs of a rapidly developed inflammation. There is pain in the affected part, the process migrates from one joint to another from day to day. There is a copious perspiration and often the spleen is slightly enlarged. The fever is usually moderate, the temperature not exceeding 103° F.

10 In which sex does rheumatism most often occur?

Male.

11 Where are bony lesions most apt to occur?

At the origin of the nerves supplying the affected points.

12 What are the lesions usually found in acute articular rheumatism.

Contracture of the spinal muscles affecting the liver and kidneys. The special bony lesions may be lacking.

13 Where do you look for lesions in muscular rheumatism of the shoulders and arms?

Along the lower cervical and upper dorsal regions.

14 The fibres of what muscle is usually contracted in muscular rheumatism of the shoulders and arms?

Trapezius.

15 When the joints of the lower limbs are affected where do you look for the lesion or lesions?

Along the lumbar and sacral regions. The innominates are often displaced.

16 Give the treatment for rheumatism.

Give a general spinal treatment, relax all tissues involved, remove the lesion, stimulate the heart and lungs, free the circulation to the part affected; stretch and manipulate the muscles in muscular rheumatism. Special treatment should be given at the spinal origin of the nerves of the part affected, raise the clavicles and ribs, spring the spine; special attention must be given to stimulating the activi-

ties of the liver, kidneys, skin and digestive system. In inflammatory rheumatism the pain is so severe that the slightest jar must be considered. Delicacy of manipulation enables one to very soon overcome the patient's fear and treat the joints at will. After the treatment for inflammatory rheumatism wrap some soft, warm material, such as cotton, around the joints. Hygiene is an important factor.

17 What is the prognosis?

Good in all forms of rheumatism. The prognosis is very good in inflammatory and muscular rheumatism, but the progress is slow in the chronic cases.

RICKETS.

(*Rachitis.*)

1 What is rickets?

A constitutional disorder of childhood exhibiting developmental anomalies, chiefly in the bones and cartilage, causing deformities.

2 What are the causes of rickets?

Poverty, artificial feeding, and bad hygienic conditions. Bony lesions may be absent.

3 What are the pathological conditions?

The most marked changes are observed in the ribs and long bones. The cartilaginous lamina between the epiphysis and the shaft are considerably thickened and are spongy and irregular in outline. The bones are soft, being extremely deficient in lime-salts. When ossification finally results the bones become large, heavy, and irregular in outline. These changes correspond to the clinical phenomena, knock-knees, bow-legs, square cranium, pigeon breast, and spinal curvature.

4 Give the symptoms of rickets.

Restlessness and slight fever at night, sweating about the head, tenderness of the body, delayed dentition and the eruption of badly formed teeth, slight diarrhoea, pallor, and enlargement of liver and spleen.

5 What conditions are often complicated with rickets?

Convulsions, laryngismus stridulus, greenstick fractures, and acute pulmonary diseases.

6 Give the treatment for rickets.

The diet is one of the most important factors. If the babe is not properly nourished by its mother's milk, diluted cows milk is the most satisfactory substitute. Older children are allowed fruits, light meats and vegetables. The patient must have plenty of fresh air, sunshine, and a daily bath. The child must be kept from walking until danger of deformity is passed; a general spinal treatment given with great care is very beneficial; treat the liver, kidneys, and spleen; keep the bowels free; give a general cervical, muscular, and abdominal treatment. If the bony parts are yet soft much may be done to restore shape to the parts. The treatment should be directed to shaping the parts undergoing deformity.

7 What is the prognosis?

Fairly good under osteopathic treatment and good hygienic conditions.

SCARLET FEVER.

(*Scarlatina.*)

1 What is scarlet fever?

An acute contagious disease, characterized by high fever, a rapid pulse, sore throat, and a punctiform scarlet rash.

2 What are the causes of scarlet fever?

The predisposing causes are anatomical displacements; the specific poison has not been discovered. The contagium is usually carried through clothes or formities, or in food like milk.

3 What are the varieties of scarlet fever?

Simple, anginoid, and malignant.

4 Give the symptoms of scarlet fever.

The attack is ushered in with chilliness; there is a rapid rise in the temperature, often reaching 105° F. during the first day; there is vomiting, sore throat, headache, and a high pulse. Beginning of the second day, there appears a bright, red rash, which appears first upon the neck and chest, but rapidly spreads over the body, and there is no intervening healthy skin. The rash disappears upon pressure. The skin is hot, the glands of the neck are swollen, and the throat is inflamed. There is headache, and possibly delirium.

The fever is severe for some four or five days, when it declines by lysis; the eruption begins to fade. In from six to nine days desquamation begins and continues for several days. In the anginoid form there is inflammation, and possibly ulceration of the throat; the glands of the neck and tonsils swell; these symptoms exist with the above symptoms. In the malignant form the onset is marked by a severe chill; high temperature may reach 108° to 110° F.; delirium, followed by coma. The rash, if the rash appears, is dark in color. Death often occurs before the appearance of the rash.

5 Where look for lesions?

Along the upper dorsal and cervical regions.

6 What is the period of incubation?

From one to seven days.

7 What conditions are often complicated with scarlet fever?

Pneumonia, nephritis, adenitis, ophthalmia, and inflammation of the heart or ear.

8 What is the duration of scarlet fever?

From twenty to thirty days.

9 Give the treatment for scarlet fever.

The treatment is almost the same as that given for measles, but in this case a thorough constitutional treatment must be given on account of the multiplicity of symptoms and the variety of organs sometimes affected. Of course the patient should be isolated, the scales shed in desquamation should be carefully collected and burned, and the room should be disinfected after convalescence.

10 What is the prognosis?

Good.

SCIATICA.

1 What is sciatica?

An inflammation of the sciatic nerve, characterized by severe pain along the course of the nerve.

2 What are the causes of sciatica?

Anatomical displacements, constipation, tumors, exposure to cold and wet, traumatism, gout, syphilis and rheumatism.

3 Give the symptoms of sciatica.

There is severe pain in the nerve, which may set in either sud-

denly or gradually. The pain is first back of the thigh, and is of a gnawing or burning character; this pain extends down the whole limb along the course of the nerve to its remotest distributions. The nerve is very sensitive to touch. The pain is increased by motion, and the patient holds himself in a constrained position. The affected limb usually feels colder and shows evidence of enfeebled vaso-motor supply.

4 Between what years does sciatica most often occur?

Thirtieth and fiftieth.

5 Which sex does sciatica most often attack?

Male.

6 What are the common lesions in sciatica?

Bony lesions along the lumbar and sacral regions.

7 Name some of the lesions often found in sciatica.

Lesions of the fourth and fifth lumbar, innominate displacements, slipping of the sacro-iliac joint, and displaced sacrum and coccyx.

8 How may the above lesions cause sciatica?

By direct pressure upon the nerve, or by impinging the fibers contributing to or connecting with the sacral plexus.

9 The contracture of what muscle often causes sciatica?

Pyriiformis.

10 From what nerves does the great sciatic come?

The fourth and fifth lumbar, and the first, second and third sacral nerves.

11 Give the treatment for sciatica.

Relax all tissues involved, remove the source of pressure or irritation. Strong internal circumduction is beneficial. Stretch the sciatic nerve. To stretch the nerve have the patient on his back; raise the straightened limb to or beyond a right angle with the trunk; with the limb in this position flex the foot strongly on the leg. The sciatic nerve may also be stretched by strong flexion of the thigh on the thorax and the leg upon the thigh.

12 What is the prognosis?

Very favorable under osteopathic treatment.

SPASTIC PARAPLEGIA.

(*Primary Lateral Sclerosis; Spastic Spinal Paralysis*)

1 What is spastic paraplegia?

A primary sclerosis of the lateral or pyramidal tracks, charac-

terized by rigidity of the paralyzed muscles and increased reflexes.

2 What are the causes of spastic paraplegia?

Anatomical displacements, exposure, acute diseases, traumatism, syphilis, sexual excess, and excessive use of alcohol.

3 Give the symptoms of spastic paraplegia.

The onset is very insidious. Dull pain, weakness, cramps and stiffness of the lower limbs are the first symptoms to attract attention. There is exaggerated knee-jerk, the patient drags his limbs, and his toes scrape along the side walk; there is rigidity of muscles in the limbs, and difficulty in walking; there are reflex contractions in the affected muscles on attempt to use them; ankle clonus can always be elicited.

4 Give the treatment for spastic paraplegia.

In general the treatment is the same as that given for locomotor ataxia.

5 What is the prognosis?

Unfavorable as to a cure, but the patients are greatly benefited under osteopathic treatment. The walking is improved, and precipitate micturition is bettered.

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## SPLENITIS.

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1 What is splenitis?

An acute or chronic proliferative inflammation of the spleen.

2 What are the causes of splenitis?

Anatomical displacements. It rarely starts primarily in the spleen itself. It is frequently secondary to some other conditions, such as malaria, traumatism, perforation of a gastric ulcer, typhoid fever, and extension of adjacent inflammation.

3 What are the most common lesions?

Rib lesions.

4 Lesions of what ribs?

The 6-7-8-9-10-11-12th ribs.

5 If you stimulate the peripheral end of the splanchnics what does it cause?

It causes sudden and large diminution of the volume of the spleen.

6 To what is this diminution due?

To contraction of its trabeculae and capsule.

7 What may occur at any time in splenitis?

Suppuration.

8 Give the symptoms of splenitis?

Usually there is no pain or tenderness unless perisplenitis exists. Dyspnoea, suppurative fever, sense of weight in the left hypochondrium, sudden pains in the gastric region followed by vomiting of pus and blood, and ascitis may be present.

9 How may the rib and spinal lesions affect the spleen?

By disturbing the nerve connections.

10 What would this disturbance of nerve connections produce?

It would produce inflammatory and congestive conditions of the spleen.

11 What kind of a gland is the spleen?

A ductless gland.

12 Where is the spleen situated?

It is situated deep in the left hypochondrium.

13 What is the length of the spleen?

12 c. m. or  $4\frac{1}{2}$  inches.

14 What is the breadth of the spleen?

8 c. m. or 3 inches.

15 What is the thickness of the spleen?

3 c. m. or  $1\frac{1}{2}$  inches.

16 What is the color of the spleen?

Dark red.

17 From what is the nerve supply derived?

From the coeliac plexus and right pneumogastric nerve.

18 From what artery is the blood supply derived?

The splenic.

19 Give the treatment for splenitis.

Remove the lesion, raise the ribs, free the circulation, treat the disease to which it is secondary, stimulate or inhibit the splanchnic area, work directly upon the organ with great care, and inhibit the solar plexus.

20 Why do you inhibit the solar plexus?

Because this dilates the abdominal vessels and draws the blood away from the spleen.

21 What is the prognosis?

It is according to the cause of the disease, but generally speaking, it is good under osteopathic treatment.

## STOMATITIS.

1 What are the main forms of stomatitis?

Catarrhal, follicular, ulcerative and gangrenous.

2 What is catarrhal stomatitis?

A catarrhal inflammation of the buccal mucous membrane. It may be acute or chronic.

3 What is follicular stomatitis?

An inflammation of the mucous follicles of the mouth.

4 What is ulcerative stomatitis?

An ulcerative inflammation of the buccal mucous membrane and gums, which may extend wider and deeper. It is usually attended with foul breath.

5 What is gangrenous stomatitis?

A spreading gangrenous affection of the cheek and gums, characterized by a hard, red swelling externally and a sloughing ulcer internally.

6 What are the causes of catarrhal stomatitis?

Anatomical displacements, irritating food, eruption of teeth, and neglect of the mouth toilet. It is often associated with scarlet fever, measles and gastroenteric derangements. It is more commonly met with in children.

7 Give the symptoms of catarrhal stomatitis.

The mouth burns, smarts and tingles, there is redness, heat and dryness of the mucous membrane, the papillæ are reddened and enlarged, and the patient craves cold drinks.

8 What is the duration of catarrhal stomatitis?

From five to ten days.

9 What are the causes and symptoms of follicular stomatitis?

Usually about the same as that of catarrhal stomatitis.

10 Give the symptoms of ulcerative stomatitis?

The condition usually starts at the edges of the gums opposite the lower incisor teeth. It then spreads backward to the adjoining portions of the cheeks and lips. The breath is foul and the tongue is coated. The saliva is offensive and often mixed with blood and pulpy matter.

11 Where do lesions usually occur?

In the cervical and upper dorsal regions.

12 How may a lesion produce stomatitis?

By interfering with the nerve and blood supply to the mucous membrane of the mouth, thus weakening the membrane and making it more liable to the effects of certain irritants.

13 Give the treatment for stomatitis.

Relax all tissues involved, remove the lesion, raise the ribs and clavicles, free the venous drainage from the affected parts, keep the teeth and mouth clean, wash the mouth with a weak solution of boracic acid, keep the bowels active. The patient must avoid such articles as tobacco. This treatment is also given for glossitis.

14 What is the prognosis?

Good in all forms except gangrenous.

### TONSILLITIS.

1 What is tonsillitis?

An inflammation of one or both tonsils, with tendency to supuration.

2 What are the causes of tonsillitis?

Lesions in the cervical region, bad hygienic surrounding, breathing poisonous gases and irritating vapors, infectious fevers and exposure to atmospheric changes.

3 How many principal varieties of acute tonsillitis?

Three.

4 Name them.

Catarrhal or simple, follicular or lacunar and phlegmonous or quinsy.

5 What is the pathological condition in catarrhal tonsillitis?

The gland is swollen and inflamed; there is an excessive secretion of mucus; there is hyperaemia of the gland.

6 Give the symptoms of catarrhal tonsillitis.

The attack usually comes on rapidly; there is pain and difficulty in swallowing, slight fever, the patient complains of a lump in the throat, slight cough, the tonsil is swollen and red, and at first is dry, but it soon becomes covered with muco-pus; offensive breath is present.

7 What is the pathological condition in follicular tonsillitis?

The gland is covered with yellowish nodules; these nodules can not escape from the crypts of the glands because there is swelling and inflammation of the gland. When these nodules are expectorated they are very offensive.



8 Give the symptoms of follicular tonsillitis.

Headache, rise of temperature, both tonsils are usually affected, pain, tenderness, difficulty in swallowing, the tonsil is covered with eight or ten small yellowish patches.

9 What is the pathological condition in phlegmonous tonsillitis?

The inflammation with infiltration is great; the tonsil is very much swollen; this form often terminates in abscess or chronic tonsillitis.

10 Give the symptoms of phlegmonous tonsillitis.

Chilliness, fever, pulse about 125 per minute, offensive breath, coated tongue, dry throat, difficult deglutition, pain referred to the ears, viscid mucus secretion, tonsils are swollen and red, and the jaws are stiff. If an abscess is formed, when it is opened or ruptured it gives great relief.

11 Name the arteries of the tonsil.

Ascending palatine, ascending pharyngeal, descending palatine, dorsalis lingual and tonsillar.

12 Give the nerve supply of the tonsil.

The nerves are derived from the glosso-pharyngeal and Meckel's ganglion.

13 Give the treatment for tonsillitis.

Relax all tissues involved, remove the lesion, give a thorough spinal treatment, raise the ribs and clavicles, free the circulation, treat the the superior cervical ganglion, (treat easy when treating over the tonsils,) keep the kidneys and bowels active; the diet must be light; treat acute tonsillitis daily; treatment inward at the angle of the jaw is very beneficial. Hygiene is an important factor. The treatment must be given with great care.

14 What is the prognosis?

Very good under osteopathic treatment.

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## TYPHOID FEVER.

(*Enteric Fever; Abdominal Typhus; Ilio-typhoid; Nerven Fieber.*)

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1 What is typhoid fever?

An acute infectious disease, excited by a special bacillus, characterized by constant lesions in Peyer's patches, mesenteric glands, and spleen, and a characteristic roseolar eruption on the abdomen.

Dr Still says when a man is said to have fever, he is only "on fire" to burn out the deadly gases which a perverted, abnormal laboratory has allowed to accumulate by friction of the journals of his body or in the supply of vital fluids.

2 What is the cause of typhoid fever?

The predisposing cause is an anatomical displacement; the exciting cause is the bacillus of Eberth.

3 How do anatomical displacements cause typhoid fever?

By weakening the system in one way or another and laying it liable to the invasion of the germ.

4 What are the lesions found in typhoid fever?

Rib, vertebral, and muscular, affecting the splanchnic and lumbar regions of the spine.

5 How do lesions affecting the splanchnic and lumbar regions of the spine cause typhoid fever?

By irritating the spinal nerves, and through them disturbing the sympathetic, vaso-motor, and lymphatic supply of the small intestines.

6 What is the pathological condition in typhoid fever?

The mucous membrane of the bowel is inflamed, the spleen is greatly enlarged, a parenchymatous degeneration of the liver, kidneys, and particularly the heart; but the characteristic lesion is found in Peyer's patches and solitary glands of the intestines, particularly those situated in the lower part of the ileum.

7 The changes in the glands have how many stages?

Four.

8 Name them.

Stage of hyperplasia, infiltration, or swelling, stage of necrosis, softening, or sloughing; stage of ulceration; and the stage of cicatrization, or healing.

9 Give the symptoms of typhoid fever.

The onset is very insidious; it begins with a headache, gradual weakness, vague pains, nose-bleed, and often slight diarrhœa. The temperature rises gradually, reaches a maximum in from one to two weeks; it remains at this elevation for another period of from one to two weeks, when a gradual defervescence begins and occupies a third period lasting from one to two weeks. Throughout its course the fever is characterized by marked daily remissions, the temperature being from one to three degrees higher in the evening than in the morning. The pulse becomes rapid, weak, and dicrotic; theres-

pirations are hurried, there are slight cough, and bronchial rales. The cheeks are flushed, and the pupils are dilated: the tongue is tremulous, red at the tip, and covered posteriorly with a whitish fur. The belly is distended with gas. The eruption appears from the seventh to the ninth day, and is most abundant on the abdomen. The eruption is composed of small, slightly elevated, rose-colored spots, which disappear on pressure

10 What does an examination of the blood show?

Reduction in the number of both red and white cells.

11 What are some of the conditions often complicated with typhoid fever?

Intestinal hemorrhage, perforation of the gut, lobar pneumonia, hypostatic congestion of the lungs, nephritis, cystitis, and bed sores.

12 What is the period of incubation?

From ten days to three weeks.

13 What is the object of treatment?

To gain vaso-motor control of the intestinal blood-supply, and to restore intestinal lymphatics to normal activity.

14 Give the treatment for typhoid fever.

Relax all tissues involved, remove any spinal, rib, vertebral, or muscular lesion present; give a careful cervical treatment, (do not fatigue the patient); stimulate the lungs and heart; most of the treatment should be directed to the spine; quiet the nervous system, keep the kidneys active, gently spring the spine; in giving the spinal treatment pay much attention to the lower dorsal and lumbar regions. Treat the diarrhoea in the usual way. Treat the liver and spleen, raise the ribs, and raise the intestines with great care. Treat the superior cervical ganglion for the fever. This regulates the systemic circulation by affecting the general vaso-motor center in the medulla. Inhibition of peristalsis should be done by work from the ninth dorsal down along the lumbar region. In regard to the diet, usually a strictly liquid diet is followed. The patient should not be allowed to get up from his bed, (a bed-pan and urinal should be used). The usual precautions should be taken for the hygiene of the sick room; the patient's body, a part at a time, should be sponged with tepid water daily. In giving the treatment do not move the patient into various positions any more than can be avoided.

15 What is the prognosis?

Very good.

## UREMIA.

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1 What is uremia?

An acute or chronic condition due to acute or chronic kidney disease, and resulting from toxemia caused by the retention in the blood of renal poisons.

2 What are the forms?

Acute and chronic.

3 What are the causes?

It may be caused by any condition which suppresses the renal secretions.

4 Uremia is secondary to what diseases?

Bright's disease, gout, scarlet fever, typhoid fever, cholera.

5 What are the symptoms?

There is nausea and vomiting, headache, drowsiness, vertigo, possibly slight delirium. The symptoms may develop slowly or suddenly. This is the gastro-intestinal form. It is called the convulsive form when there are spasms resembling epileptiform convulsions. The urine contains albumin and casts. The pulse is rapid, the face is pale, and there is a peculiar urinous odor about the patient.

6 What are the eye and ear symptoms?

Blindness, dimness of vision, tinnitus aurium, deafness, etc.

7 How are they remedied?

By restoring the circulation to the brain.

8 What is the object of the treatment?

To arouse the kidneys to activity, and to excrete from the system the poison that is causing the trouble.

9 Where treat to accomplish this object?

Along the renal region of the spine.

10 Would you stimulate or inhibit?

Stimulate.

11 Where and how would you treat cases that have not urinated for several hours?

Give a good stimulating treatment from the 6th dorsal to the 2nd lumbar.

12 Give the treatment.

Relax the spinal tissues, give a local treatment to the kidneys, renal vessels, and associated nerve plexus, give the abdominal treatment at and above the umbilicus, and stimulate the heart and ungs to cause perspiration. For the convulsions, relax the spinal

and cervical tissues and then inhibit the superior cervical ganglion. Keep the skin and bowels active.

13 Why should you cause perspiration?

Because perspiration helps free the blood of the poisons.

14 What is the prognosis?

Fair; while guarded in the acute form, the chances in the chronic form are better than in the acute form; but the prognosis must always depend upon that for the primary disease.

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VALVULAR DISEASE.

1 Name eight valvular diseases.

Aortic regurgitation, aortic stenosis, tricuspid regurgitation, tricuspid stenosis, mitral regurgitation, mitral stenosis, pulmonary regurgitation and pulmonary stenosis.

2 What is aortic regurgitation?

Failure of the aortic valves permits a return of the blood to the ventricle.

3 What often results from aortic regurgitation?

Hypertrophy of the heart.

4 What is the condition of the pulse in aortic regurgitation?

Very violent and usually visible in the neck, head and upper extremities. It is also jerky and full, followed by a sudden collapse.

5 What is aortic stenosis?

A narrowing of the aortic orifice, obstructing the blood flow into the aorta from the left ventricle.

6 To what is aortic stenosis due?

The thickening of the valve segments.

7 What is mitral regurgitation?

Imperfect closure of the mitral valve.

8 To what is mitral regurgitation usually due?

Rupture of the mitral leaflets, diseased condition of the cordae tendineae, and dilatation of the left ventricle.

9 What is mitral stenosis?

An obstruction to the flow of blood through the mitral orifice, due to an abnormal condition of the mitral valves.

10 What is tricuspid regurgitation?

An inability of the tricuspid valves to perfectly close the tricuspid orifice.

11 What is tricuspid stenosis?

An obstruction to the flow of blood through the tricuspid orifice, usually due to some abnormal condition of the valves.

12 What is the predisposing cause of valvular disease?

Anatomical displacements which affect the heart.

13 Give the treatment.

Remove the lesion or any obstruction to the blood flow, raise the ribs and keep the lungs well stimulated. Treat the accelerators with great care. The patient should be kept quiet and free from excitement. The patient should stroll around out of doors a great deal of his time, and avoid stimulating drinks. The diet must be light and nutritious. Hygiene is an important factor.

14 What is the prognosis?

Usually unfavorable as to cure, although several cases have been cured under osteopathic treatment.

VARICELLA.

(*Chicken-pox.*)

1 What is varicella?

An acute, contagious, febrile disease, characterized by a vesicular eruption.

2 What are the causes of varicella?

The predisposing causes are anatomical displacements, or any condition which lowers the vitality of the person; the specific poison has not been satisfactorily isolated, although it is suspected that certain protozoa are the direct cause; but as in the case of vaccinia and small-pox, positive proof is wanting. One attack usually protects from others.

3 Give the symptoms of varicella.

The attack commences with a slight fever, chilliness, vomiting, and aching in the back and legs; followed in twenty-four hours by the appearance of a papular eruption, which in a few hours becomes vesicular. The eruptions are discrete, often avoid, somewhat superficial, flattened, not infrequently umbilicated, and contain clear or cloudy fluid. In thirty-six or forty-eight hours the contents becomes purulent. During the third and fourth days the eruptions shrivel into dark brown crusts, which become detached, usually without leaving scars. The vesicles appear in successive sets during the first two or

three days of the disease, so that eruptions in various stages of development may lie side by side.

4 What are some of the conditions often complicated with varicella?

Erysipelas, nephritis, mild and isolated, and suppuration with abscesses in the deeper cellular tissue are occasionally seen. Varicella and measles, however, are most frequently associated.

5 What is the period of incubation?

From seven to fourteen days.

6 What is the duration of varicella?

About seven days.

7 Where do most of the lesions occur?

Along the cervical and upper dorsal regions. The clavicles and upper ribs are also often displaced.

8 Give the treatment for varicella.

See treatment for measles.

9 What is the prognosis?

Good.

VARICOSE VEINS.

1 Give the definition of varicose veins.

It is a condition in which the veins are enlarged, elongated, and distended with blood.

2 What are the causes?

Anatomical displacements, and various obstructions to the venous flow.

3 Where do the lesions most often occur?

In the lower ribs, spine, and pelvis.

4 What are some of the causes and conditions which obstruct the venous flow?

Prolapsed diaphragm, crowded caecum or crowded sigmoid, pressure of tumors, prolapsed uterus, relaxed abdominal walls, tight lacing, tight garters, etc.

5 In what part of the body do varicose veins usually exist?

In the lower extremities.

6 This condition takes place most often in what veins?

The internal or long saphenous veins.

7 Where is the most common place for the internal or long saphenous vein to be affected?

Near the saphenous opening

8 The vaso-motor innervation to the lower limbs is from what part of the spine?

The lower dorsal, lumbar and sacral.

9 What is the object of treatment?

It is to free the venous flow, and reduce the distended walls.

10 Give the treatment.

The treatment must be given with great care. Remove the obstruction; if the trouble be at the saphenous opening, relax all structures at the opening; a good spinal treatment should be given; keep the bowels free. If the patient wears tight garters he must remove them. Correct the lesion, stimulate the vaso-motor innervation of the limbs, treat the muscles of the limbs and free the circulation.

11 What is the prognosis?

Very good.

VARIOLA.

(*Smallpox.*)

1 What is variola?

An acute contagious disease, characterized by vomiting, lumbar pains, an eruption which is at first papular, then vesicular, and finally pustular; and by fever which is marked by distinct remission, beginning with the advent of the eruption, and lasting until the latter becomes pustular.

2 What are the causes of variola?

The predisposing causes are anatomical displacements or any condition which lowers the vitality of a person. The contagion of variola has not, as yet, been discovered; it is contained in the pustules, and excretions and exhalations of the patient. The contagion is active during all stages.

3 What are the varieties of variola?

Discrete, confluent, malignant and varioloid.

4 Give the symptoms of discrete smallpox.

The attack begins with a chill, vomiting, frontal headache, and pains in the back and limbs. The fever rises rapidly, and lasts un-

til the appearance of the eruption. About the fourth day of the disease the eruption appears, which consists of coarse red spots, appearing first on the forehead, at the border of the hair, and on the wrist. These spots are converted into papules in about two days, and feel like shot beneath the skin. About the fifth or sixth day of the disease the papules become vesicles, which are umbilicated, and on the eighth day of the disease the vesicles become pustules, and soon have a red border around them. In two or three days scabbing begins, and on the eighteenth or twentieth day the scabs begin to drop off, leaving red, glistening pits. There is another rapid rise of temperature, with the coming of the pustules on the eighth day, the fever of suppuration, the amount of rise depending upon the number of pustules. This fever lasts about four days, when convalescence begins.

5 Give the symptoms of confluent smallpox.

The symptoms are almost the same as those given for discrete smallpox, except, possibly the symptoms may be more severe. The rash appears on the third or fourth day. The pustules unite, and form large patches. The secondary fever, or fever of suppuration, is very severe; with it there is violent delirium, and often stupor. Convalescence is delayed and irregular.

6 Give the symptoms of malignant smallpox.

The poison seems to prostrate the patient at once, and he seldom rallies, dying before the eruption appears. The pustules become filled with blood, if then out. Hemorrhages are very common in this form of smallpox.

7 Give the symptoms of varioloid smallpox.

This is modified smallpox occurring in one who has been partially protected by previous vaccinations. The symptoms are mild; the eruption resembles that of common smallpox, but is usually very scant; secondary fever is absent.

8 What conditions are often complicated with smallpox?

Pneumonia, laryngitis, pleurisy, dysentery, myocarditis, inflammation of the eyes, arthritis, boils and abscesses.

9 What is the period of incubation?

About ten days.

10 Give the treatment for variola.

The osteopath uses the same precautions with regard to isolation, disinfection, and antisepsis as are followed by other physicians. The ordinary method of preventing pitting by keeping the room

darkened, and cover the exposed parts with cloths soaked in dilute carbolic acid or bichlorid of mercury. For further treatment see treatment given for measles.

11 What is the prognosis?

Very good.

WHOOPING COUGH.

(*Pertussis.*)

1 What is whooping cough?

A highly contagious disease which is characterized by a catarrhal inflammation of the respiratory tract, associated with a peculiar spasmodic cough, ending in a prolonged, crowing or whooping inspiration.

2 What are the causes of whooping cough?

Anatomical displacements, and exposure to atmospheric changes. The disease occurs both sporadically and epidemically. It is most frequently met with in children. The disease is unquestionably contagious, and the virus seems to be associated with the sputum. One attack protects from others.

3 Where look for bony lesions in whooping cough?

Along the upper, middle, and lower cervical vertebræ. The clavicle, first rib, and the first and second dorsal vertebræ are also often found displaced.

4 What does contracture of the omohyoid muscle do?

Draws the hyoid bone against the pneumogastric nerve.

5 What do upper cervical lesions affect?

The sympathetics and pneumogastric nerve.

6 What do contractures of the throat tissues and lesion of the first rib and clavicle affect?

The venous and lymphatic drainage, and lead to catarrhal conditions. The mucous membranes are thus weakened and laid liable to the action of the specific infection.

7 What do middle cervical lesions affect?

The diaphragm and phrenics

8 What may lesions of the upper dorsal vertebræ and of the upper ribs cause?

Derangement of the sympathetic connections of the laryngeal innervation.

9 What is the pathological condition in whooping-cough?

There is an inflammation of the respiratory mucous membrane, but nothing peculiar.

10 What is the period of incubation?

It varies from four to fourteen days according to the extent of catarrhal trouble in the patient existing at the time.

11 What diseases are often complicated with whooping-cough?

Bronchitis, emphysema, and pneumonia.

12 What is the entire duration of the disease?

From a few weeks to four months.

13 How many stages of whooping-cough?

Three.

14 Name them.

Catarrhal, paroxysmal, and terminal stage.

15 Give the symptoms of the catarrhal stage.

The disease begins with the symptoms of coryza, and bronchial catarrh, slight fever, running from the nose, sneezing, dry cough, and rales. This stage after lasting about a week or ten days passes into the paroxysmal stage.

16 Give the symptoms of the paroxysmal stage.

The cough becomes paroxysmal, ending in a crowing, or whooping inspiration. During the cough the face becomes blue, the eyes are injected, and the veins are distended. Ulcers frequently occur under the tongue. Vomiting often occurs, and sometimes hemorrhages. This stage begins with the first "whoop", and lasts from ten to thirty days.

17 Give the symptoms of the terminal stage.

The cough loses its paroxysmal character, and becomes loose, and other symptoms subside. This stage lasts several weeks.

18 What causes the paroxysmal cough?

Irritation of the pneumogastric nerve.

19 Give the treatment for whooping-cough.

Relax all tissues involved, remove the lesion, free the circulation about the larynx and whole respiratory tract, stimulate the lungs, raise the clavicles, and ribs, and remove all sources of irritation to the laryngeal innervation. To relieve the cough treat down along the larynx and trachea, and about the angle of the jaw. A general treatment should be given to avoid the complications and sequelæ that may arise. The patient should be carefully protected from changes of temperature. During the catarrhal or febrile stage the patient should be confined to the bed. The diet should be light and nutritious. Hygiene is an important factor.

20 What is the prognosis?

Very good.

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