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Case report

Late splenic metastasis after curative resection for oesophageal carcinoma

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Abstract

The spleen is an unusual site of distant metastasis from solid tumours. While contiguous involvement of the spleen may occur in tumours arising from the stomach, pancreas or colon; the spleen as the seat of distant metastasis is a rare occurrence. We report herewith one such instance of metastatic involvement of the spleen in an operated case of carcinoma oesophagus. © 2002 Elsevier Science B.V. All rights reserved.

Keywords: Splenic metastasis; Carcinoma oesophagus

1. Introduction

Solitary splenic lesions as a single site of metastasis from treated solid tumours are a rare occurrence. While metastatic involvement of the spleen may occur as a part of disseminated disease, clinically obvious manifest lesions to the spleen are very rare and are evident only in terminally sick patients or as incidental findings at autopsy [1]. Splenic metastasis are known to be more common in tumours with a strong propensity to develop haematogenous spread. With more frequent and aggressive radiological examinations of patients during follow up for cancer and an increasing number of patients having a long term follow up, the documentation of such lesions may increase over a period of time [1]. Most of the reported cases of splenic metastasis sited in literature (about 60%) are from tumours with a gynaecologic primary [1]. We herewith report a rare finding of an oesophageal carcinoma metastasising to the spleen.

2. Case report

A 69-year-old male was referred to us in January 1997 with a 3-week history of progressive painless dysphagia predominantly for solids. Investigations revealed a neoplastic lesion involving the esophagus at about 34 cm from the incisors and biopsy revealed it to be a squamous carcinoma of the oesophagus. A transhiatal oesophagectomy (THE) with a was done and histopathology confirmed it to be a pT3N1 squamous carcinoma of the oesophagus. Reconstruction of the alimentary tract was done making a gastric tube. The patient was asymptomatic on follow up; when he complained of epigastric pain and fullness of about 2 weeks duration. Apart from a vague fullness in the left hypochondrium clinical examination did not reveal any positive findings. A barium study showed the stomach tube to be normal with no evidence of recurrence /narrowing of the anastamotic site. Upper gastroentestinal (GI) endoscopy and endoscopic ultrasound of the stomach tube were normal with no evidence of any locoregional recurrence. In view of the persistent pain and a vague fullness in the left hypochondrium a computerised tomographic (CT) scan of the abdomen was ordered which showed a large mass lesion in the inferior aspect of the spleen (8.0×5.7 cm^2). A CT guided fine needle aspiration cytology (FNAC) of the lesion was done and it confirmed it to be a metastatic squamous carcinoma in the spleen (Fig. 1) consistent with a primary in the oesophagus. The patient was treated with systemic chemotherapy with Cisplatin (100 mg/m^2) and 5-FU (1000 mg/m^2), two cycles given over 3 weeks. The patient developed significant toxicity following the chemotherapy and no further local or systemic treatment was considered for him. The patient succumbed to bilateral bronchopneumonia from aspiration related to vocal cord paralysis from nodal recurrence about 11 months following the completion of chemotherapy. There was no clinical evidence of systemic disease at the time of death.

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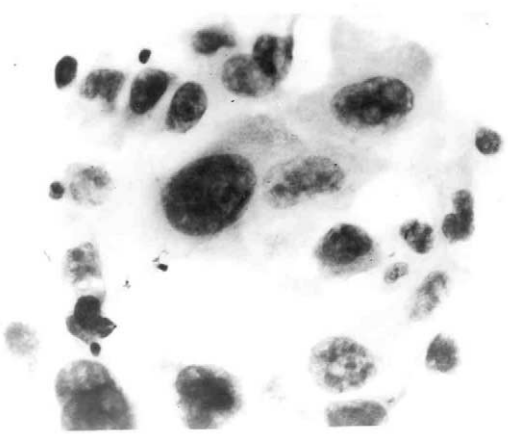

Fig. 1. FNAC slide photomicrograph showing the metastatic squamous carcinoma cells in the spleen.

3. Discussion

The spleen is the tenth most frequent site of metastasis [1]. However, the spleen as a solitary site of haematogenous metastasis from solid tumours is a rare clinical finding and has an autopsy incidence of 7.1% [1]. Of the autopsy studies the commonest sources of metastasis to the spleen are primaries from the ovary, breast; lung and melanoma [1,2]. In more than 50% of the patients, widespread carcinomatosis is present as well [2]. While isolated instances of metastatic lesions to the spleen from primaries in the endometrium, cervix, ovary, lung, colon, urinary bladder, thymus [1], thyroid [3], kidney [4] have been described from time to time, there is no definitive report of metastasis to the spleen in a treated case of oesophageal squamous carcinoma. Next to gynaecologic cancers (60% of the reported cases), colorectal cancers have the second most frequent incidence of metastasis to the spleen with about 11% of all reported cases having a colorectal lesion as the primary [1]. Although several anatomic; haemodynamic and immunologic hypothesis have been proposed from time to time to explain the rare finding of splenic metastasis none of them is absolutely convincing and satisfactorily explains the resistance of the spleen to metastatic involvement. It is believed that metastasis to the spleen occur haematogenously and may be a part of generalized haematogenous dissemination. This assumption is largely based on the hypothesis by Marymount and Gross who concluded that splenic metastasis might arise on account of the cells to the spleen being carried to that organ by the artery supplying it [2]. A humoral substance produced in the spleen: 'the splenic factor' may destroy the malignant cells reaching the spleen [5]. The periodic contractions of the spleen may force the blood from the sinusoids into the splenic veins keeping the cells in constant motion [6]. Foreign cells including tumour cells are readily phagocytosed in the Billroth cords by the macrophages and tissue histiocytes [7]. The splenic lesion may be associated with vague non-specific symptoms, or with pain as in our case. It may be simply an incidental finding in an asymptomatic patient at radiologic examination during a routine follow up. The increasing use of imaging modalities such as the CT scan/magnetic resonance imaging (MRI) have led to the identification of an increasing number of splenic metastasis from different types of solid tumours [8]. MRI may be more sensitive than CT scan in the detection of splenic metastasis and addition of supermagnetic iron oxide may increase the sensitivity further; as the iron oxide reduces the signal intensity of the spleen but not of the tumor and hence improves tumour contrast [9]. FNAC from splenic lesions has been proven to be a relatively low risk and a cost effective procedure [10]. In the present case the FNA from the splenic lesion done under CT guidance (Fig. 2) was uneventful and gave a conclusive diagnosis in the first attempt.

This case depicts that splenic metastasis; although rare; may occur with a locoregionally controlled oesophageal cancer. In the present case; the lesion in the spleen was an isolated metastasis in a locoregionally controlled squamous oesophageal carcinoma. In our patient, the metastasis occurred after approximately 34 months of disease free interval.

We treated this patient with a systemic treatment at the first instance as we felt that the initial lesion in the spleen was only an isolated manifestation of microscopic disease elsewhere systemically.

As the patient was not in a good general condition to undergo any further evaluation of the splenic lesion, any further local treatment for the splenic lesion was not considered. There was therefore no imaging done to follow up the splenic lesion as we felt that this would only add to the anxiety or give a 'false' sense of security to the patient. The patient expired 11 months after completion of chemotherapy due to recurrence of nodal disease in the superior mediastinum leading to vocal cord paralysis and bilateral aspiration bronchopneumonia. He had no clinical evidence of systemic disease at the time of his death.

Although splenic mass lesions are more common due to a variety of other causes, in a patient with a known history of

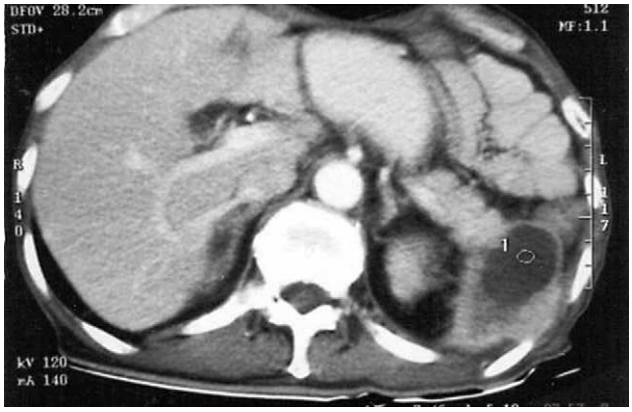

Fig. 2. CT scan showing the metastatic lesion in the spleen.

malignancy the lesion must be considered metastatic unless otherwise proven.

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