Bristol again

This week we publish three further articles about the issues raised by the Bristol affair. The first, by Nick Barnes, is a personal account of his first being invited, and then having his invitation withdrawn, to join the public inquiry into the management of children receiving complex cardiac surgical services at the Bristol Royal Infirmary in 1984-95.

The next two pieces, one by Steve Bolsin, the "whistleblower" in the Bristol case, and the second by James Stewart, a parent of one of the affected children, respond to a previous article by Peter Dunn (24 October, p 1144)—as do three letters in our correspondence columns (pp 1592-3) and a personal view (p 1603).

We do not intend to conduct the public inquiry in the pages of the *BMJ*, but we are publishing these articles now because one raises questions about the composition of the inquiry panel and the others respond directly to Dunn's article: see also our editorial by Smith. We will report on the progress of the Bristol inquiry when it starts taking evidence next year.

(Very) short service on the Bristol inquiry

Nick Barnes

The following is an annotated extract from a personal journal of recent months. Events are recorded in normal type and contemporary thoughts and commentary in italics.

June 1998

The prolonged hearing of the disciplinary committee of the General Medical Council on the doctors charged with professional misconduct in the Bristol paediatric cardiac surgery unit concludes at last. The media coverage has been extensive, simplistic, and condemnatory. The cardiac surgeons, Mr James Wisheart and Mr Janardin Dhasmana, and the then chief executive of the trust, Dr John Roylance, are found guilty. They need police protection as they leave the hearing.

I suppose all doctors must share the deep sympathy I feel for these men. I cannot remember meeting a single doctor who was not trying to do his best for his patients, although success and failure are of course distributed as in all spheres of human activity. Were the events accurately reported? What were the pressures on this team? Paediatric cardiac surgery is an extremely demanding specialty. Were these adult surgeons under pressure to take this on? Since the destructive reforms of 1990 the prevailing ethos of cooperation in the NHS has changed to competition. There is widespread feeling among my colleagues that the GMC under the current chairman, Sir Donald Irvine, has a mission to be the saviour of self regulation in medicine. Have these surgeons been offered as sacrificial lambs on this altar? It is vital that innovation and the ability to take on high risk procedures are not stifled, but these sad events will mark a watershed for medicine and bring to an end the often inspired but sometimes overenthusiastic amateurism that has characterised much English medicine.

Richard Smith's leader in the *BMJ*, "All changed, changed utterly," expresses an apocalyptic view of the Bristol events but also defines the issues raised. In an intemperate comment on the GMC findings Frank Dobson, the secretary of state for health, expresses his personal views on the guilt and inadequate punishment of the major figures and, under pressure from parents not represented at the GMC hearing, announces that he will set up a public inquiry into all aspects of these events.

This seems to have become a Pavlovian political response to any situation in which there is serious public anger: Stephen Lawrence, BSE, Bloody Sunday . . . who is it going to help?

July 1998

Arrangements for the inquiry are under way, and a chairman, Professor Ian Kennedy, and two members of the three member panel, a senior paediatric nurse and an academic lawyer, have been appointed. The place for a medical member is unfilled.

Why have they not yet recruited a doctor? It will be a difficult job, probably best filled by a paediatric cardiac surgeon—but it could be impossible for another member of such a small specialty to take this on. Presumably someone will do so; I wonder for what motives?

21 August

Call from a paediatrician colleague who works at the Department of Health. Is there any chance that I might be able to take a two year, full time post as the medical member of the panel of the Bristol inquiry?

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BMJ 1998;317:1577–9

Coming totally out of the blue, this induces mixed feelings. This would obviously be a difficult and undoubtedly harrowing job, but it could be important and influential; the brief of the inquiry will be much wider than I had realised. I am a little flattered to be asked. What are my credentials? I have long experience in teaching hospital clinical paediatrics and plan to stop clinical medicine when I am 60 next year. Perhaps my most relevant area of experience has been my responsibility for the medical aspects of the paediatric liver transplantation programme at Addenbrooke's for the past 12 years. I certainly took this on in the spirit of well meaning amateurism with no training in the field and I have first hand knowledge of the problems of providing a front line service involving high risk surgery with inadequate financial backing and staffing.

Further discussions with staff at the Department of Health provide a little more background to the inquiry, but the only written information I can extract is the initial press release. Eventually I am able to make contact with Una O'Brien, the civil servant who is to be secretary for the inquiry, and I learn the terms of the appointment. I send my resumé and begin to give it serious thought.

Several late night telephone conversations later I feel that, although this looks much more like a duty than a pleasure, my background experience is appropriate to take on the job and it is an important role that I should accept.

15 September

I am formally offered and accept the job. Greeted with enthusiasm, welcomed to the panel, and asked to attend the first meeting on 22 September. Should I not meet Ian Kennedy beforehand? Would it not make sense to have a preliminary meeting? What if we don't get on together? The other panel members have not met each other or him. Apparently these matters are of no concern.

This is distinctly odd. I have been included on the panel for an important public inquiry without meeting anyone involved and without any background reading or preparation other than that gleaned from the press. I suppose they know what they are doing? In spite of these reservations I have taken the job, so I rearrange the date of my retirement and prepare to spend much of the next year in Bristol.

22 September

Arrive at Department of Health early as suggested but Una O'Brien is too busy to meet me as arranged. Ushered to large and lightly populated offices with computers showing screen savers. Meet a lawyer, press agent, and other support team members showing signs of underemployment. I am told several times that the BSE inquiry now employs 83 people; it is implied this is a little over the top but "our team will grow." The two other panel members arrive and seem very pleasant and sensible. We are joined by Ian Kennedy and Una O'Brien and start the meeting. There is to be an introduction by the chairman, then discussion. The primary purpose of the inquiry is to "lance the boil" created by these sad events. We have semijudicial powers but are not a court or a trial and are not involved in any compensation claims, though our findings may be used. There are more than 200 families who wish to give evidence, but it would be impossible to see them all. There are currently notices in the major papers asking those who wish to give evidence to submit written statements first. The first phase of the inquiry will be devoted to finding out exactly what happened. This will inevitably be very harrowing. In the second phase we will be able to draw conclusions and make recommendations, with advice from all relevant representative bodies and individuals.

I offer only two significant comments. I wonder whether families still in a state of unresolved grief many years after the events will be overrepresented among those wishing to give evidence (this is contested). I also mention some concern that, since the primary purpose of the inquiry is to examine supposed failings in a surgical specialty, it would give our report more credibility—especially with the medical profession but also with parents—if a surgeon was included on the panel (also contested).

After the meeting I confirm the terms of my appointment in detail, including the starting date, duration, salary, and terms. I am to email a short resumé of my background for distribution to the press. I will receive a letter of appointment from the secretary of state; the terms will be confirmed with my chief executive. I agree to be in Bristol on 26 October to prepare for the public opening on 27 October.

I am somewhat reassured. The team seems friendly and committed, although hardly professional in its approach at this early stage, and many members, especially the leading counsel, have yet to be recruited. I like the other panel members and feel I could work with them. I am more convinced that the medical panel member needs to have experience in at least a similar field.

The same evening, just after I have emailed my resumé, a call from Una O'Brien. She is "really, really worried" about my concern at the lack of a surgeon on the panel. The deaths of the children in question may have been due to many others in the chain of command of surgery. My presence on the panel is not as a representative of the medical profession but as an individual. I am asked to consider these matters over the weekend.

During the weekend I crystallise my thoughts a great deal. I develop some ideas on medical mentors and sabbatical leave and briefly convince myself these would really enhance the lot of consultants coping with the increasing pace of medical change. I return committed to accepting the terms of the inquiry as constituted and determined to contribute as effectively as possible.

28 September

Visit from Una O'Brien. She and Ian Kennedy have decided my inclusion in the panel "wouldn't work"! Absolutely nothing personal of course—they need a doctor with different experience. What experience? No idea at all. Apologies, thanks for help so far. Goodbye.

Not having been sacked from a job before, I am really rather stunned and simply express deep surprise. Of course my pride is a little dented but, clearly, far more important considerations are relevant here. I say I will speak to Ian Kennedy.

30 September

Ring Ian Kennedy. Sorry, "was not of the impression that I had been either hired or fired," but he was concerned by my comment that the panel should include a surgeon. He can think of "about 16 specialties" that might wish to be represented. He agrees they need a doctor but with different experience. What experience? No idea, haven't started to look. Nothing personal of course, would I like to submit my ideas to the panel? He has a duty to do the best he can in this job. Can he help with any disruption caused by my brief change in plans? Moderately apologetic. Goodbye.

This seems to me to be poor person management, and I feel aggrieved. But I suspect a political agenda underlying these events. Most doctors I know feel strongly that the panel must include a doctor with first hand experience of major surgery in children.

The medical profession is already feeling under political and public siege. Is this a further attempt to undermine the principle of self regulation? The profession has responded with impressive speed and decision to the lessons of the GMC hearing. Like every specialist in the land, I am submerged in directives outlining my new duties in clinical governance, audit, and appraisal.

Afterthoughts

I reflect that the inquiry will consume a huge amount of NHS money and will reopen many wounds that, however caused, should now be healed or healing. Perhaps it may yet prove useful.

It is possible that some families will be afforded a clearer insight into the true difficulties of funding, organising, delivering, and accomplishing leading edge surgery and may thus come to understand more clearly what happened to their children and whether a different outcome was possible

It is possible that a more honest, rational, and less punitive view of the roles of the central figures may be achieved and, without the need for the panel to prove its ability to discipline doctors, some of the villains and some of the heroes may change their roles.

It is possible that some useful recommendations on the organisation and delivery of health care and the training, motivation, and surveillance of doctors may emerge. But my brief experience of the world of public inquiries leaves me with no optimism whatsoever.

(Accepted 16 November 1998)

The Wisheart affair: responses to Dunn

The Bristol cardiac disaster

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BMJ 1998;317:1579–82

I wish to express my disappointment and concern at the publication of Peter Dunn's article.[1] The article raises several important points, which need to be addressed, and I feel that my knowledge and position in Bristol at the time give me some authority to comment.

Attitudes in Bristol

- The "many senior colleagues" referred to in the article are exhibiting exactly the same behaviour patterns that allowed the Bristol cardiac disaster to occur in the first place. These are lack of insight, failure of critical appraisal, and muddled thinking.
- In the first half of the article Dunn presents the case that there was not a problem but then asks, "Why wasn't the responsibility of the hospital administration recognised?" This leaves unanswered the question "responsibility for what?" For allowing a problem not to develop? Was there or was there not a problem? I and others believe that there was a serious problem.
- If, as Dunn suggests, his three colleagues were treated unjustly, why did they not make use of the GMC's appeals mechanism and appeal not just against the sentences but also against the verdict of the disciplinary committee?

Excess mortality for operations

Dunn asks, "Why were the surgeons judged only on a small selected fraction (4%) of their paediatric surgical workload during 1990-5?" I find his answer less satisfactory than the alternative explanation that the United Bristol Healthcare Trust only provided to the GMC's disciplinary committee the details of the operations that it had requested at such short notice that the GMC was unable to deal with anything other than the operations for atrioventricular canal and arterial switch. Even in these limited cases the excess mortality for these two operations was sufficient for the disciplinary committee to reach its verdict.

However, we now learn that there were other operations with equally bad records for mortality. On 27 October, BBC television's *Newsnight* disclosed that in Mr Wisheart's series of operations for truncus arteriosis repair in patients under 1 year of age, nine out of 12 patients died. One of the survivors is Ian Stewart, who suffered massive permanent brain damage. The programme also reported that, in the series of operations for total anomalous pulmonary venous drainage, Wisheart also has an unenviable record. Thus Dunn's suggestion that 96% of the paediatric cardiac surgical work for this period was acceptable is open to question.

In this context it may be important to note that an independent inquiry, commissioned by the United Bristol Healthcare Trust, into the adult cardiac surgical work of Mr Wisheart concluded that his risk adjusted mortality for adult cardiac surgery was four times that of his colleagues in Bristol.[2]

The inevitable conclusion is that the record for the paediatric operations used by the GMC inquiry was not the isolated imperfections that Dunn is suggesting in his article but may more truly represent a level of achievement in clinical activity that required urgent review and improvement.

Institutional considerations

- I agree that the failure of two cardiologists and one anaesthetist to give evidence to the disciplinary hearing gave the impression of guilt and that they should have been urged to give evidence to the GMC inquiry. Their attendance at the public inquiry will be compulsory and informative.
- The audit that Dr A Black and I carried out was never secret. The perception of secrecy was attributable to the lack of effective communication between the directorates of anaesthesia and surgery and may also be attributable to Mr Wisheart's failure to recall some important meetings with myself, Professor John Farndon (at which contemporaneous notes were made), and Professor Gianni Angelini, where concerns about performance were expressed.
- The director of anaesthetics had always been used as the vehicle for channelling concerns expressed by the cardiac anaesthetists to the cardiac surgeons; it had been agreed as early as 1991, by a meeting of all cardiac anaesthetists, that I should "keep my head down," as my audit activities were already attracting adverse criticism from the department of cardiac surgery.
- A proper audit of work was never conducted despite Dunn's assertion, and this is evidenced by the alteration of the unit's arterial switch data at the meeting on the night before the fatal operation on Joshua Loveday. Had a complete and full audit been undertaken before this, the correction of data at the last minute would not have occurred. Also, the miserable record for these operations would have been revealed at an early stage and possible lifesaving action taken. Mr Wisheart was asked on several occasions to provide a full audit of the unit's activity but this was tragically never forthcoming; the reason for this omission has never been made clear.
- I agree that all members of the paediatric cardiological team agreed that the operation should go ahead. My argument was not medicopolitical but that there was an institutional problem in Bristol, which meant that the safety of the child could not be guaranteed if the arterial switch operation was undertaken in Bristol. When the question was put—"Should this operation go ahead in Bristol tomorrow?"—I was the sole dissenter, and I requested that my dissent from the view be minuted as I was sure that the child's life was being jeopardised.

Bias and restricted reporting

The lack of insight shown by Mr Wisheart in comprehending the implications of his adult cardiac surgery (commented on by Treasure[2]) has, as reported by BBC1's *Panorama* in July, now extended to the unit's prior performance of paediatric cardiac surgery and beyond the three doctors involved. While I can understand the natural psychological defence mechanisms of denial and rationalisation exhibited by the three doctors, I am not convinced that this is justifiable in senior colleagues or warrants publication in the *BMJ*. I believe that the propagation of the emotional and biased views expressed in Dunn's article does not reflect well on medical staff in Bristol or on the wider medical community in the United Kingdom.

The publication of such a one sided article in the *BMJ* is reminiscent of the time when, under legal threat from the United Bristol Healthcare Trust, the journal was prevented from publishing any letters or articles that had not been approved by the senior management of Bristol Royal Infirmary. This allowed the publication of a letter by Joffe, which glossed over many of the important criticisms that were being made at that time,[3] but prevented the publication of a considered response from Dr Black and myself. I would like the editor to confirm to his readers that the threat of legal action by the United Bristol Healthcare Trust has now been lifted from the *BMJ*.

1 Dunn P. The Wisheart affair: paediatric cardiological services in Bristol 1990-5. *BMJ* 1998;317:1144-5.
2 Treasure T, Taylor K, Black I. *A report into adult cardiac surgery at the Bristol Royal Infirmary*. Bristol: United Bristol Healthcare Trust, 1996.
3 Joffe HS. Hospital banned from doing neonatal heart operations. *BMJ* 1995;310:1195.

(Accepted 18 November 1998)

Editor's response to Stephen Bolsin

The *BMJ* came under no legal pressure to publish the paper by Peter Dunn. We published it because we believe that all voices should be heard in this important debate, and the voice of senior figures from Bristol is heard more often in corridors than in public.

Dr Bolsin strikes a sensitive nerve when he asks about legal pressure. We consult our libel lawyer several times a week, and often papers are suppressed or emasculated. The *Columbia Journalism Review*, the world's leading scholarly publication on journalism, says that Britain has an unfree press.[1] I agree and have written about this at length and with passion, quoting John Milton that "if it comes to prohibiting, there is not ought more likely to be prohibited than truth itself."[2 3] Britain has a thicket of libel, confidentiality, and copyright laws that stop free speech. The newspaper owner Cecil King wrote presciently that because of fear of libel "inefficient hospitals are not named, doubtful share flotations pass without comment, and some fraudulent individuals go unexposed until it is too late and someone has been hurt." He said that before Robert Maxwell famously used the libel laws to silence the press over his misdemeanours and before the *BMJ* had to pay out £107 000 on a libel case that we won.[4]

The *BMJ* did receive a lawyer's letter in response to the news piece we published in 1995 on neonatal heart operations in Bristol, and we published a correction.[5] It said that "there was no instruction from the Department of Health to suspend neonatal heart operations" and that "it was incorrect to say that one surgeon had been transferred to another post and the other had been sent for further training." The public inquiry will no doubt clarify these statements.

In addition, we did at one stage (and sadly I have to operate from memory, not records) have a paper on what was happening with various neonatal cardiac operations in Bristol submitted to us for possible publication. We began by getting a detailed review on the data, recognising that if we were going to publish them there would be considerable legal problems. Before we got to that stage, however, the authors withdrew the paper.

1 Brendon P. Amendment envy: a report on the mother country's unfree press. *Columbia Journalism Review* 1991;Nov-Dec:68-71.
2 Smith R. An unfree NHS and medical press in an unfree society. *BMJ* 1994;309:1644-5.
3 Craft N, Sheard S, Smith R. The rise of Stalinism in the NHS. *BMJ* 1994;309:1640-5.
4 Dyer C. BMJ faces £107 000 bill over libel case. *BMJ* 1996;313:897.
5 Dyer O. Hospital banned from doing neonatal heart operations. *BMJ* 1995;310:960. (Correction. *BMJ* 1995;310:1288.)

A patient's perspective

James Stewart

In Professor Peter M Dunn's article concerning the General Medical Council's inquiry into cardiac surgery at the Bristol Royal Infirmary, the general complaint was that the GMC was harsh and unjust and was driven by inaccurate press reporting.[1] Nothing could be further from the truth. The press is so concerned about being sued for libel, especially where eminent members of the medical profession are involved and the potential compensation is enormous (certainly far in excess of what a child's life is considered by the law to be worth) that unless the facts are thoroughly verified, the newspapers will not print a story. My personal experience of these events gives the patient's perspective.

Charges were dropped

Professor Dunn correctly notes that many of the charges considered by the inquiry were dropped. They were indeed. However, Professor Dunn's assumption that they were dropped because the doctors were innocent of the charges is incorrect. Let me explain why I say this by briefly giving the example of the charge in respect of my son.

The following charge—charge 9(c)—was laid: "You [Mr Wisheart] gave the parents of Ian Stewart information about the risks of mortality and of brain damage in such a way that: i) Did not accurately reflect your own experience as a surgeon."

This charge was dropped by the GMC. It was dropped not because the evidence produced showed that we had not been misled but because Mr Wisheart's actual mortality results for truncus arteriosus were never produced.

This vital evidence was never even requested by the GMC. Ms Lander's statement on day 16 of the hearing confirms this astounding fact.[2] Furthermore, Mr WJ Brawn, the expert witness for the prosecution, subsequently confirmed in writing to us that: "I have not seen the results of surgery for truncus arteriosus performed by Mr Wisheart and therefore I do not know what his own mortality rate is for that procedure."

Mortality figures

When my wife, Bronwen Stewart, was called to give evidence she attempted to present the mortality figures but was told by the prosecutor that they were "irrelevant and inadmissible" as evidence. We subsequently wrote to the GMC many times, saying that if this evidence was not adduced then the charge in respect of our son must inevitably fail. The evidence was never produced and, inevitably, the charge failed.

BBC *Newsnight*, on 27 October 1998, revealed that before operating on Ian, Mr Wisheart had performed 11 truncus arteriosus operations with nine "early" deaths. Statistically, reconstructing the methodology used at the GMC, this results in an "optimistic" rate for Mr Wisheart greater than the "pessimistic" rate derived from the figures for 1991 in the Society of Cardiac and Thoracic Surgeons' voluntary audit (the United Kingdom Cardiac Surgical Register); both estimates are based on 95% confidence intervals. The GMC accepted that 1991 is the year in which the figures from this register would have been available to Mr Wisheart when our son was considered for surgery in 1993.

These 1991 figures give a mortality of 25%. Excluding Mr Wisheart's results reduces this percentage substantially. Mortality in the United States and Australia was significantly lower than in the United Kingdom. The University of California, for instance, had no early deaths in 22 operations between 1986 and 1990 for the condition that Ian had. Mr Brawn himself, interestingly, is a coauthor of a paper revealing that between mid-1979 and December 1983, 23 patients with truncus arteriosus were operated on in Melbourne.[3] Three patients died; two of these were babies under 1 month and severely acidotic. This result was obtained a full decade before Ian underwent surgery.

In utter frustration, I interrupted the GMC proceedings on 29 May 1998, asking why the evidence in respect of my son's charges had not been produced. The only reply I received then, or since, was to be physically removed by the police.

The only people allowed rights and representation at the GMC were the doctors charged and the GMC itself. My son was accorded no rights, nor was he allowed representation. The High Court in London confirmed this when we took the GMC to judicial review before the start of its inquiry.

Adding insult to injury

I believe that the GMC deliberately perverted the course of justice, yet there is nothing I can do about it. The doctors charged can at least appeal to the privy council. No such option is available to the victims. Perhaps if I was wealthy, rather than a former chartered accountant whose career and livelihood have been destroyed by what Mr Wisheart did to my son, I might be able to afford the costs involved in appealing to the Court of Human Rights. Given my circumstances, the price of justice is beyond my reach.

The Bristol Royal Infirmary scandal, together with its subsequent handling by the GMC, has clearly shown that self regulation has failed the patient at every stage. I have come to thoroughly detest the medical establishment. My son suffered severe brain damage, which left him screaming in agony for over a year, and all that the GMC did was to add further insult to the injury suffered. This story is just one of many such stories that I and the other parents at this disgraceful GMC hearing could tell.

In the true interests of patient protection, the sooner the GMC and the whole failed edifice of self-regulation is replaced, the better.

Like Professor Dunn, I too hope that the public inquiry will examine the full record of these surgeons, both the adult and the paediatric cases. I, too, hope that the two cardiologists—namely Dr Joffe and Dr Jordan,

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together with Dr Monk, the key anaesthetist—who were not called by the GMC will give evidence at the public inquiry. The GMC should be asked to explain why they were not subpoenaed as witnesses.

Many questions remain

Like Professor Dunn, I and the other parents involved consider that there are numerous questions concerning the conduct of the GMC inquiry that require an explanation. The following are but a few.

- Why was morbidity and brain damage, despite the charges, never examined?
- Why were the surgeons' log books never fully analysed and examined, and why were they not requested before the start of the inquiry?
- Why was Joshua Loveday's the final operation considered by the GMC? Indeed, on the very day that Mr Ash Pawade, the new paediatric cardiac surgeon, began work, Mr Wisheart performed his final operation on a child. The child died of severe brain damage.
- Why was a 1988 study that was carried out for the Department of Health and Social Security, which clearly proves that the Bristol Royal Infirmary was significantly worse than any other paediatric centre in the United Kingdom,[5] not presented as evidence?
- Why did nothing happen in 1992 when, as was reported by the television programme *Dispatches* in March 1996 and again in July 1998 by *Panorama*, Sir Terence English informed the Department of Health that he considered that the Bristol Royal Infirmary should be dedesignated? Why wasn't Sir Terence summoned as a witness?
- Why in 1995 was Mr Wisheart awarded an A merit award, whereas Dr Stephen Bolsin felt forced to leave the country?
- Why did the Society of Thoracic and Cardiovascular Surgeons, to whom annual returns are made, not act?
- Did the Bristol Royal Infirmary act against the patients' interests by operating purely so that the substantial supraregional funding would continue? The lack of funding mentioned by Professor Dunn was proved at the GMC not to have been an issue.

I hope the public inquiry will address these and numerous other issues.

1 Dunn, PM. The Wisheart affair: paediatric cardiological services in Bristol, 1990-5. *BMJ* 1998;317:1144-5.
2 General Medical Committee. *Transcript of the professional conduct committee hearing.* London: GMC, 1998.
3 Sharma AK, Brawn WJ, Mee RB. Truncus arteriosus. Surgical approach. *J Thorac Cardiovasc Surg* 1985;90:45-9.

(Accepted 25 November)

Words to the wise

Muscling in

In response to Jeff Aronson's filler about fillers (a meta-filler?), and the subsequent editorial plea for further alternatives to the word "filler," I would like to suggest *intercalation*. The word has a medical pedigree in the form of *intercalated discs* (which is what we called the striations in skeletal muscle fibres when I was a medical student), and it also fits the bill descriptively: the *Oxford English Dictionary* defines it as "the insertion or interjection of something additional or foreign."

It arrived at its current meaning after a long journey from an Indo-European root that was pronounced *kal* or *gol*, and which meant something like "to announce." From this ancient origin, the word spread out across Europe. Northern European tongues preserve the sound and meaning in various words, including the English *call*. Slavic languages have a root *glagol*, meaning "word," which gives us *Glagolitic*, the name of an old alphabet that has been largely replaced by Cyrillic—it looks as if it might have been rather too curly to write quickly. (The Cyrillic alphabet, incidentally, is named for Saint Cyril, a ninth century Greek missionary, who patched it together from Greek and Hebrew letters in order to produce a writing system for the Slavic languages. Saint Methodius was also involved, but he seems to have been the loser in the struggle for posterity.)

In Latin, the same Indo-European root gave rise to the word *calare*, to proclaim. The first day of each Roman month was a day for priestly proclamation; these days were therefore referred to as the *Calends*. From that, we derive our word *calendar*.

Now, the Roman year of 12 lunar months added up to a total of only 355 days. It moved inconveniently out of synchrony with the seasons unless extra days or months were inserted at intervals; a total of seven extra months every 19 years were required. So on the Calends, the priests would announce any forthcoming *intercalary* additions to the normal year. And it is the notion of "something extra inserted" that comes down to us in *intercalation*.

In Republican Rome, intercalation was a political tool: priests could prolong the term of office of a favoured magistrate, or delay the accession of an enemy. Adjustments therefore had little to do with calendrical accuracy, and by 47 BC winter was arriving in March. Julius Caesar legislated 90 extra days in 46 BC to get things back in step with the seasons, and then abolished the lunar calendar that had caused all the problems. He increased the length of the year by adding fixed days to various months, and introduced the leap year to bring the average year length up to 365.25 days. The result was the *Julian calendar*, and the month of *July* still bears his name.

But the Julian year is just a little too long—by rather less than a day a century. So in 1582 Pope Gregory XIII was obliged to abolish 10 days in October in order get the date of Easter back in line with the seasons. To prevent such an inconvenience recurring, he introduced a final calendrical subtlety that we will soon have the chance to celebrate. He trimmed three leap years out of each four centuries: 1600 was a leap year, but 1700, 1800, and 1900 were not. We are now due another leap century, and on 29 February 2000 I plan to raise a glass in toast to the continuing complexities of intercalation.

Grant Hutchison, *consultant anaesthetist, Dundee*

We welcome articles of up to 600 words on topics such as *A memorable patient, A paper that changed my practice, My most unfortunate mistake,* or any other piece conveying instruction, pathos, or humour. If possible the article should be supplied on a disk. Permission is needed from the patient or a relative if an identifiable patient is referred to. We also welcome contributions for "Endpieces," consisting of quotations of up to 80 words (but most are considerably shorter) from any source, ancient or modern, which have appealed to the reader.