undoubtedly follow as systems fostering continuing medical education evolve and are optimised.

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Perinatal and infant postmortem examination

Quality of examinations must improve

EDITOR,—When one of my twin sons was stillborn in London in 1992 one of the main factors in my acceptance of the painful necessity of a postmortem examination was the knowledge that it would be carried out by a dedicated neonatal pathologist. I was confident that the quality of the examination would be such that any ascertainable cause of his unexpected and inexplicable death would be discovered.

Patrick H T Cartledge and colleagues report that the main reason for the low rate of perinatal postmortem examinations is parental refusal, followed by failure of clinicians to request an examination.¹ In their study almost half of the examinations failed to reach the minimum acceptable score and "information giving parents and clinicians a better understanding of the cause of death" was obtained in only 18% of cases. I would suggest that many bereaved parents would be even more likely to refuse consent if they knew these results. Furthermore, some clinicians might be less likely to request a necropsy or attempt to persuade ambivalent parents to give consent.

A higher rate of perinatal postmortem examinations is necessary for all the reasons given by Cartledge and colleagues. But surely the first step in achieving this is to take active measures to improve the quality of the examinations through training and audit. Yet this issue is barely addressed by either Cartledge and colleagues or Malcolm Chiswick in his editorial.² Instead their solutions focus on exhorting clinicians to have a more positive attitude. Such an attitude will come about when clinicians and parents are persuaded that no stone will be left unturned in the search for the cause of death. In the meantime, simply hoping that the guidelines of the Royal College of Pathologists will improve matters is not good enough.³

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2 Chiswick M. Perinatal and infant postmortem examination. *BMJ* 1995;310:141-2. (21 January.)

3 Royal College of Pathologists. *Guidelines for post mortem reports*. London: RCP, 1993.

Postmortem examinations are the final audit

EDITOR,—The appreciable contribution that postmortem examination makes to the final diagnosis should not be overlooked.¹ I recall a patient diagnosed as having had bronchial carcinoma for two years who was treated with radiotherapy for recurrent haemoptysis; there was no tissue diagnosis of carcinoma despite multiple fiberoptic bronchoscopies. When he died of a massive haemoptysis in 1991 I requested a postmortem examination. This reported an aspiration pneumonia caused by inhalation of a chicken bone with no evidence of neoplasia.

The suggestion that few postmortem studies are done because it is difficult to ask relatives' permission at the time of bereavement is a poor excuse. In my experience, a simple and clear explanation of why an examination is being sought has nearly always resulted in permission being granted. Moreover, relatives want to know the results of the examination.

Postmortem examinations may challenge our self complacency in diagnosis and inspire improvement in future clinical management. We should actively seek postmortem examinations as they are the final audit and we can improve only when we are aware of our deficits.

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Non-invasive investigations are also helpful if permission for a necropsy is refused

EDITOR,—Patrick H T Cartledge and colleagues¹ and Malcolm Chiswick² suggest that clinicians should be driving the process for increasing rates of necropsy. In this unit, however, if permission for a necropsy is refused, we arrange for detailed magnetic resonance imaging and plain radiography and ultrasonography to try to establish whether any important abnormalities have been missed, particularly in congenital malformations. This permits detailed investigation of the fetus or infant while still respecting the wishes of the parents.

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Postmortem reports provide valuable information

EDITOR,—Malcolm Chiswick's editorial¹ and Patrick H T Cartledge and colleagues' paper² raise the profile of postmortem examinations of fetuses, neonates, and infants. The term perinatal postmortem examination may imply that postmortem examination of younger fetuses is less important. The contrary is the case—for example, many terminations of pregnancy for abnormalities detected by ultrasonography occur before 20 weeks, as do some intrauterine deaths, in which postmortem examination is central to establishing the diagnosis.

With increasing expectations of parental bonding, grieving, and sensitive disposal of fetal remains, it is impractical that the body should be examined by a clinical geneticist whenever dysmorphism is suspected. Regional genetics services are stretched as it is, and transferring the body to the regional centre may be difficult or costly. Parents may expect the examination to be done locally. Good quality photographs, x ray films, and a postmortem report including histopathological findings and other appropriate results are invaluable to the geneticist.

The issue of the rate of postmortem examinations has been oversimplified. At Lewisham Hospital in 1994, 98 fetal cadavers were sent to the mortuary.

No postmortem examination was performed on seven, and a full examination was performed on 64. In the remaining 27 cases x ray films were obtained, photographs and measurements taken, and a clinical abstract and the external appearances recorded. Often the results of full placental examination, including histological findings, are given in these reports, which are routinely prepared when consent for dissection is withheld. These reports are also valuable to the obstetrician and the geneticist and should not be ignored when the rate of postmortem examinations is assessed.

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Paediatricians' opinions are also important

EDITOR,—The recommendation that more accurate diagnosis would be achieved and more appropriate help given to families if paediatricians ensured that an experienced pathologist performed a necropsy on more than three quarters of neonates and infants who die is probably correct.^{1,2} The other side of the coin, however, should also be considered. Of those infants who have not been under the care of a paediatrician and on whom a necropsy is performed after they die suddenly, what proportion had their health and life before death critically appraised by an experienced paediatrician? Would not the accuracy of the diagnosis be improved if such a paediatric appraisal always took place? The diagnosis emerges from a combination of the history and the findings at necropsy; currently errors occur when the necropsy findings are viewed as the gold standard in isolation. The opinion of an experienced paediatrician is required to confirm that the diagnosis based on the necropsy findings fits the circumstances of the child's health before death and the developmental capabilities of the child.

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Survey of women's reactions to perinatal necropsy

EDITOR,—In a recent postal questionnaire survey of parents' satisfaction with the arrangements pertaining to postmortem examination after perinatal loss we found evidence to support Malcolm Chiswick's contention that seeking parental consent for postmortem examinations requires communication skills and experience.¹ We would suggest that communicating the findings of the examination requires similar skills and experience.

In mid-1994 a member of the social work department telephoned women who had had a perinatal loss—a termination of pregnancy for conditions diagnosed antenatally, spontaneous abortion, stillbirth, or neonatal death—at the Queen Victoria Hospital in 1992 and 1993, explaining the aims of the study. Twenty nine women agreed to participate. The questionnaire allowed the women or their partners, or both, to express their feelings regarding various aspects of the necropsy (table).

	Had agreed to necropsy (n=19)	Had refused necropsy (n=10)
Satisfied with arrangements for handling the baby	18/19	9/10
Found meeting with the doctor seeking consent helpful	14/16	2/4
Counselled about usefulness of necropsy	9/16	3/7
Counselled about necropsy procedure	8/16	1/7
Advised about possibility of limited necropsy		0/8
Advised of availability of report in plain language	16/18	
Satisfied with presentation of necropsy findings	8/16	
Regretted decision to agree or refuse necropsy	1/18	3/10

The number of women who claimed that they had not been informed of what the necropsy entailed or of its usefulness is alarming since it suggests that decisions to consent to or refuse a request for a necropsy are not made after informed counselling. For example, one woman who had agreed to a necropsy assumed that the procedure was only "tissue sampling" and thought that the questionnaire was not applicable to her. There was an apparent lack of knowledge of a limited necropsy; possibly clinicians and patients had had reasonably acceptable diagnoses for the perinatal loss and considered further attempts at explaining the procedure or the possibility of a limited necropsy unnecessary. Alternatively, parents may fail to comprehend what has been said because of fear, anxiety, or grief.² In this respect, a leaflet in plain language explaining the advantages and disadvantages of a necropsy and what it entails may allow grieving parents to make an informed decision regarding consent.

Some of the women were dissatisfied with the findings of the necropsy or with the delay to receipt of the results. Review of the case notes for those women who were dissatisfied with the findings indicated that the necropsy did not add further to the clinical findings. The dissatisfaction is regrettable as clinical findings need to be confirmed by a properly performed necropsy, and a necropsy with no positive findings is valuable.³ Delay may be necessary so that all laboratory results can be included, but this delay may prove unsatisfactory for some parents unless it is explained when consent to necropsy is sought.

Greater emphasis should be placed on better communication,⁴ whether in obtaining consent or in relaying the findings, and in involving clinicians and pathologists at such sensitive times.⁵

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Oral submucous fibrosis

EDITOR,—H I Atrah's editorial on fibrin glue¹ helps to consolidate the theory of hypercoagulation and local coagulopathy in the oral cavity in oral submucous fibrosis. Oral submucous fibrosis is a chronic disease of unknown aetiology reported

mainly in Indians. As well as occurring in India it has been seen in Indians living in South Africa, Malaysia, Kenya, Uganda, Fiji, and Britain. For instance, in Leicester, England, which has a large number of Indian immigrants, the expected number of patients with the disease is 3000.²

After working for about 15 years on oral submucous fibrosis colleagues and I have shown that the saliva of patients with the disease contains a thrombin-like substance, identified as fibrin production factor. In contrast, fibrinolytic substances have been shown in normal saliva. Other centres in India have confirmed the presence of fibrin production factor in the disease (personal communication).³

I have shown that when citrated plasma, either from a patient with oral submucous fibrosis or from a normal person, is mixed with saliva from a patient with oral submucous fibrosis it forms a clot. The best clot formation takes place after about two to 12 hours. I believe that fibrin production factor in saliva interacts with plasma or fibrinogen in the submucous area of the oral cavity and produces dense fibrosis—there is a continuous "fibrin glue" process in the oral submucosa.

In addition to the local coagulopathy produced by fibrin glue mechanisms, defective fibrinolysis⁴ and a picture similar to that seen in well compensated disseminated intravascular coagulation seem to occur in oral submucous fibrosis.⁵ Such defective or delayed fibrinolysis could be due to a genetic predisposition or secretion of a substance like aprotinin, which delays the fibrinolytic action of plasmin. The production of such a substance in saliva in oral submucous fibrosis needs further study. Perhaps some antithrombin agent or anti-protinin substance could help stop the progression of the disease.

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Parents in the recovery room

EDITOR,—P A Hall and colleagues are in favour of parents being in the recovery room as their child recovers "whenever possible."¹ Some responses to their questionnaire, however, do not seem to support this view. On the postoperative parental questionnaire 23 of 132 parents said that they felt anxious, and the authors themselves quote Bevan *et al*, who showed that parental anxiety is associated with more behavioural disturbances in children.²

Perhaps of greater concern is the fact that roughly one in five nurses felt distracted, commenting that it seemed as though they were looking after "two patients"—that is, parent and child. During the immediate postoperative recovery period, potentially life threatening complications requiring prompt and skilled treatment by the recovery room staff may arise. The workload in the recovery room is unpredictable, with periods when all the bays are occupied being interspersed with periods when only one or even no patients are present. It is almost impossible to be sure that sufficient staff are available to care for parents at all times, and nurses should not be distracted from caring for the patients, as was the case in this study. Patients' privacy must also be respected, and it is difficult to see how this can be

achieved with present arrangements in British hospitals.

There seem to be sound benefits to the child when his or her parents are in the anaesthetic room,³ although these have not been proved. Parents may also value being in the recovery room,⁴ but the priority must be the child's welfare. Further investigation should be undertaken to evaluate any benefits to the patient against clinical risks before allowing parents into the recovery room becomes normal practice.

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Keyhole surgery

EDITOR,—In his review of a television programme on keyhole surgery Stephen Nixon makes some surprising comments regarding hernia repair.¹ I was the "hernia surgeon, giving the impression of never having seen a laparoscopic repair," who demonstrated the simplicity of the open mesh technique for hernia repair. It was performed under conscious sedation and local anaesthesia, and the patient later expressed that "it was easier than going to the dentist." This low cost procedure with minimal risk gives excellent results,² is performed as a day case procedure, and results in little postoperative discomfort, and most patients are fully active within a week. It matches the advantages, without having the disadvantages, of the more invasive keyhole method requiring general anaesthesia.

Nixon admits the risk of organ injury with the laparoscopic approach ("still less than one in 200 cases") but does not mention that such injury is virtually unknown in many thousands of open operations reported.^{3,4} He writes of a recurrence rate of 10% with "conventional repair," but with modern open procedures the recurrence rate is less than 2%.^{3,4} He mentions the "considerable mortality" of the open repair, but this occurs only in emergency situations such as strangulation and in elective operations mortality should be zero.^{2,3}

I agree that no mention was made of randomised trials, but there were time constraints. I would have liked to state that, because of the low recurrence rate associated with the open mesh repair, a randomised trial would probably require vast numbers of patients to show any significant differences. When data are already available from many sources, with reports of failure of the laparoscopic technique ("conversions"), an unacceptable rate of early recurrence, major complications, and even deaths, can it be justified to randomise and expose so many patients to the technique? Judging from the viewers' response to the programme, many people would not wish to be randomised when they realise that a groin hernia may be easily repaired under sedation and local anaesthesia.

Rather than wasting time and resources on the keyhole method, more surgeons should be trained in tensionless mesh repair under local anaesthesia. This is easily taught and has achieved results unlikely to be surpassed by the keyhole method.