the brain syndromes under discussion. If it is no longer acceptable to label every neonatal encephalopathy as hypoxic-ischaemic, it must be time to define the pathophysiologies more precisely. Further use of modern technologies like magnetic resonance imaging or spectroscopy should help with this task.

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Subdural haemorrhages in infants

Almost all are due to abuse but abuse is often not recognised

In this issue Jayawant et al report the results of a study of the incidence, causes, and outcome of subdural haemorrhages in infancy in a defined geographical area in England and Wales from 1993 to 1995 (p 1558).[1] This subject is important because, as this study confirms, most subdural haemorrhages are due to abuse. The subdural haemorrhage is just one element of the brain injury in infants who have suffered non-accidental head injury (caused either by shaking alone or by shaking and impact).[2]

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Ascertainment seems to have been thorough and the results are likely to be generalisable to the rest of the United Kingdom. The results suggest that a large district general hospital can expect, on average, to see an infant with a subdural haemorrhage every year. Most of these infants needed intensive care and, as in other studies, the outcome was poor.[3 4] Assuming that the results are generalisable, this paper contains important messages for paediatricians, general practitioners, social workers, and neurosurgeons.

Seven of the infants had previously been abused, and six had siblings who had been abused. These findings raise the question whether more could have been done to protect the infants from the assaults that caused their subdural haemorrhages. The authors also state that six infants had histories of "repeated admissions to hospital with symptoms of drowsiness and lethargy before a subdural haemorrhage was diagnosed." For most of these babies a subdural haemorrhage is likely to have been the cause of their earlier symptoms. However, these symptoms are non-specific, and if the baby improves while under observation it is understandable that the diagnosis is sometimes missed. A recognised pitfall is that blood staining of cerebrospinal fluid can be wrongly attributed to trauma from the lumbar puncture needle.[5]

Perhaps the most important message from the paper, however, is that when subdural haemorrhage was identified abuse was often not diagnosed when it should have been. One of the 33 cases of subdural haemorrhage was caused by a road accident; 21 of the other 32 cases had been attributed to abuse. The authors reviewed the evidence in the remaining 11 cases and considered that in six the evidence was "highly suggestive of abuse." This evidence included coexisting fractures and salt poisoning and leaves little room for doubt.

The authors classify the five remaining cases as showing "no obvious evidence of child abuse." Yet some or all these cases will arouse suspicion in the minds of many readers. There was no history of trauma in four of the five cases. The fifth infant (who also had a retinal haemorrhage) had allegedly "tipped from a bouncy chair." In the absence of an underlying cause (such as a coagulopathy) the presence of a subdural haemorrhage without a history of substantial trauma means that abuse is likely and should lead to thorough investigation.[2 6] The extent to which minor trauma can cause subdural haemorrhages remains controversial.[7]

Some infants were not investigated adequately. Two of the four infants with "no obvious evidence of child abuse" did not undergo a skeletal survey. Fractures visible on skeletal survey have been reported in 32-70% of infants with subdural haemorrhages due to abuse.[8 9] Similarly, two of the four did not undergo ophthalmoscopy. Again, retinal haemorrhages have been reported in 38-89% of infants with subdural haemorrhages due to abuse.[3 10 11]

Only 22 of the infants had undergone all the investigations that the authors recommend (multidisciplinary social assessment, ophthalmoscopy, a skeletal survey (which may need to be repeated), a coagulation screen, and computed tomography or magnetic resonance imaging). Furthermore, ophthalmoscopy should be performed by an ophthalmologist; apart from the greater expertise of ophthalmologists, some retinal haemorrhages may be missed if indirect ophthalmoscopy is not carried out.[12] Only 14 of the infants in this study were examined by an ophthalmologist.

In summary, almost all the subdural haemorrhages in this study were either definitely or probably due to

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abuse. The fact that seven infants had been previously abused shows that measures taken to protect them after their earlier abuse had been inadequate. An earlier opportunity to make the diagnosis had probably been missed in at least some of the six infants who had previously been admitted with drowsiness and lethargy. Three infants were apparently considered by those caring for them not to have been abused despite not having been adequately investigated. This paper thus provides evidence that British paediatricians are sometimes not diagnosing child abuse even when investigation shows that the diagnosis seems inescapable. These failures are important. If we do not recognise child abuse no action will be taken to protect the child and the child's siblings from further assaults.

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Regulation of doctors and the Bristol inquiry

Both need to be credible to both the public and doctors

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Personal view p 1600

Doctors in Britain have been insufficiently regulated for too long. It has been too easy for doctors to sink into poor and dangerous performance without anybody doing anything. Now—in response to a storm of publicity about bad doctors—we may be in danger of overregulation. The dangers of overregulation may be less obvious than those of underregulation, but in the long run they may be just as damaging.

We contribute to the publicity storm today by publishing an account by a doctor who was appointed to the public inquiry into the case of inadequate cardiothoracic services for children in Bristol and then unceremoniously dumped for unconvincing, possibly political, reasons (p 1577).[1] In the current climate it's especially important that the inquiry has the confidence of the medical profession—and that probably means having a doctor as a member.

The question of whether the Bristol inquiry should include a doctor arises as the intensity of the debate over the regulation of doctors increases exponentially. The General Medical Council took a century and a half to introduce last year a system for responding to poorly performing doctors.[2] Proliferating reports of dangerous doctors caused the last government to produce—embarrassingly slowly—guidance on poorly performing doctors.[3] But in its declining years that government had no stomach for a battle with the profession over self regulation. What's more, a new reforming president was elected by the GMC, regaining the initiative. But the Labour government elected in 1997, driven by focus groups, had to pay attention to media reports on poorly performing doctors when producing its proposals on NHS reform. The result is that self regulation is now viewed as part of a complex system of ensuring good performance that includes (in England at least) the National Institute for Clinical Excellence, the Commission for Health Improvement, clinical governance, continuing professional development, and compulsory audit.[4] The system is being assembled, but how it will work is far from clear.

Then Bristol struck. Everything, the *BMJ* argued, changed utterly.[5] The GMC found three Bristol doctors guilty of serious professional misconduct and struck off two.[6] The secretary of state announced a public inquiry and claimed that all three doctors should have been struck off.[7] The profession went into overdrive to produce overdue reform, particularly in local self regulation.[8] The GMC came up with the idea of revalidation.[9] Meanwhile, media stories have appeared almost daily on "rogue doctors" and "butcher surgeons."[10] The government has had no choice but to "do something," and the Queen's speech hinted at emergency powers to protect patients.[11] The government also thinks that it has to have the power to change rapidly the laws governing professional bodies like the GMC. The worry for the profession is that such powers may lead to reform being politically rather than professionally led.[12]

It's against this background that the Bristol inquiry has begun and will start its public hearings after Christmas (www.Bristol-Inquiry.org.uk). Opinion in the city, and across the country, is deeply divided between those who believe that the doctors have been made into scapegoats by the GMC to ensure its survival and those who think that the delay in taking effective action was scandalous. Some believe that the inquiry has an agenda to abolish self regulation. Rumour and counter-rumour are rife, and the inquiry will have a tough job.

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