LEADING ARTICLE

How good is the evidence available in child protection?

Jonathan R Sibert, Sabine A Maguire, Alison Mary Kemp

There is little doubt that the attitude of most paediatricians to child protection has changed since the travails of Roy Meadow and David Southall. However, those involved in giving evidence in court may have noticed increasing difficulties before then.

Twenty years ago, child abuse was seen and managed in the general paediatric ward, often used as a "place of safety" while complex clinical and social issues were dealt with. Paediatricians and the Children Act 1989 recognised that hospitalisation was inappropriate for most child protection cases, and as paediatrics became a field of subspecialties, child protection became the domain of community paediatricians. This has to some extent led to a deskilling of general paediatricians who have lost confidence in the field, further compounded by recent high-profile legal cases.

The legal system evolved so that, in any but the most straightforward child protection cases, the examining paediatrician gave little more than basic professional evidence. An independent expert was appointed to assess the case, make a report and give "expert opinion" in court. The court appearance was often intimidating, and many paediatricians felt exposed and humiliated by the aggressiveness of the defending barrister. The national media, throughout this period, had become heavily polarised against the profession. Fewer and fewer paediatricians were inclined to give evidence in court or felt capable of the assessments needed to protect children.

This meant that an increasingly small number of people were available to be experts in complex child protection cases. These doctors were faced with increasing demands on their time for legal work and became increasing targets for criticism, particularly in the court situation. Few paediatricians involved in expert witness work have not faced problems,¹ and in many cases the problems have threatened both their careers and mental health. This further added to the vicious circle of concern regarding any involvement with child protection. Paediatricians previously prepared to advocate for the victims of child abuse are dwindling.

As if all this was not enough, there have been concerns about the science available to paediatricians in child protection cases, and through them, to the courts. Twenty years ago, it was sufficient to look at textbooks before giving evidence in court. However, it had become clear that this was insufficient for many legal cases. Many of us were increasingly worried about the standard of the science available to us in child protection and the separation of evidence from the mainstream assessment in medicine. Evidence-based medicine seemed to us to have passed child protection by.

However, recently, this view was challenged by the *British Medical Journal* on 22 July 2006. The front page stated that the evidence for child protection was "well established". The leader by the distinguished American paediatrician David Chadwick² further amplified this theme. He describes the evidence behind child abuse as "robust". This broad statement is made on the basis of 16 000 citations for child abuse and historical reference to the formative work of Tardieu³ and Kempe *et al.*⁴ We think that this perception is misleading and fails to assess the quality of the published evidence base. When a standard systematic approach to the critical appraisal of this literature is adopted, the findings are very different and there are distinct scientific limitations to many of the published studies.

We should not underestimate the effect that evidence-based medicine has had in medical science generally. A defined evidence base substantiated by high-quality systematic reviews and nationally agreed clinical guidelines is now needed before many treatments or assessments are allowed to proceed.

As one of the few systematic review teams in this field, we have investigated the scientific literature on several key questions regarding the diagnosis of physical child abuse (www.core-info.cf.ac.uk). In general, there was a paucity of literature. Most studies are performed in the US, and although these studies are invaluable, the difference in health systems, demographics, definitions and types of abuse and legal systems mean that the study

findings are not necessarily directly transferable to the UK. Studies are compromised by the differences in definitions of abuse used in different countries over the 50-year time period of this research and the variation in diagnostic techniques. The security of diagnosis of abuse and reverse causality introduce considerable bias. Case numbers included in studies are small and highly selective, and most observational studies are of a case series design, inherently compromised by selection bias and lacking any comparative data.

There are areas where the quality of evidence is good—for example, rib fractures in young children that have a high specificity for abuse and a profile of non-accidental scalds, where the literature defines clear differences between intentional and non-intentional scalds. Our work shows other areas that refute widely established dogma. A review of 50 years of international literature identified three studies that give good evidence that the age of bruises cannot be accurately judged on a visual interpretation of bruise colour.⁵ When we evaluated the evidence surrounding the dating of fractures, we came to the over-riding conclusion from the only three studies in the world literature that dealt with the topic⁶ that fractures can only be dated in the broad time frames. There is a profound lack of published evidence around the recognition of adult bites, cigarette burns and the specificity of a torn frenum for physical abuse.

This field of research is challenging in several areas. It is difficult to perform standard diagnostic studies in the absence of a gold standard test for abuse that is independent of the presenting injuries or symptoms of neglect. Consent issues for the inclusion of abused children and the relative rarity of abuse make it difficult to undertake cohort studies, not to mention the challenges of defining ideal control cases. We agree² that we must be creative in our study design and use several sources and study types to inform the evidence base that we draw on in decision making.

The over-riding priority must be to encourage optimum research in this field. There are many paediatricians and allied professionals who have worked in the field of child protection for many years and continue to do so. Many have experiences that could be translated into scientific published evidence, if they were able to publish their data from often meticulously kept retrospective case series. Better still, they could use their experience to set a hypothesis and undertake well-designed multicentred prospective comparative studies. This work urgently needs the support of research funding bodies.

Expert witnesses appearing in court require a thorough understanding of the

quality of the available scientific evidence and must be able to convey this to the court in an understandable manner. Courts and clinicians need to appreciate that a child abuse evidence base is a long way from being robust or complete and that "absence of evidence is not necessarily evidence of no effect or no association." Where opinion is drawn from personal practice, this must be explicit. As Baroness Kennedy⁷ stated "A doctor can be convinced, based on his or her experience, that a defendant is guilty—but unless there is compelling evidence supported scientifically, he or she should not express that view in criminal proceedings", which sets the standard for an expert opinion in the British courts. We would like to see the paediatrician in clinical charge of the case being the lead figure in the presentation of the medical issues to the court.

Although the clinical field of child protection has gone through a difficult period in the UK, the current situation has the capacity to stimulate good-quality scientific

research and redress the imbalance. A collaborative approach across the UK, with high-quality multicentre trials answering the key questions is essential, and requires appropriate support and funding. By so doing, the profession will regain scientific credibility and support those clinicians who are carrying out this crucial work.

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