Evidence-Based Medicine and Medicine-Based Evidence: The Expert Witness in Cases of Factitious Disorder by Proxy

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The UK media has recently devoted much attention to the role of expert witnesses in child protection cases. One or two particular pediatricians who have given expert testimony have been the subject of personal vilification and professional investigation. These cases raise questions about the use of medical expert testimony when there is real uncertainty in the scientific community and the emotional stakes are high. Do doctors use scientific evidence to make diagnoses in the same way that the courts use evidence to make judgments? The cases also raise questions about the personal credibility and trustworthiness of experts: should we allow ourselves to be seen as personally powerful witnesses? Are we responsible for how we are seen by the jury? In this article, these questions are addressed, with the conclusion that distress and anxiety about child maltreatment influences all the players in the justice process and may interfere with the process of justice.

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The British media has recently been much exercised about the role of expert testimony in child protection and maltreatment cases. There have been several highly publicized cases relating to multiple or repeated cot deaths in a family, which have then resulted in the mother's being charged with murder. In one case, the mother was acquitted. In two other cases, the mothers' convictions for murder were overturned, apparently because of concerns about the reliability of the expert evidence. In all three cases, the prosecution had used the same expert, an eminent professor of pediatrics, who is now being vilified by the press as a man who has injured families and tarnished the names of innocent mothers.

These cases raise several fascinating questions for all those who give expert testimony and especially for forensic psychiatrists. Specifically, I argue that there are two questions of primary interest: first, is medical reasoning compatible with legal reasoning? Or, to put it another way, how does evidence-based medicine relate to medicine-based evidence in the courts? Second, if a case based on expert testimony is overturned on appeal, what does that say about the expert? Is an expert liable for what lawyers do with her testimony?

Munchausen Syndrome by Proxy and Cot Death

In 1977, Professor Roy Meadow first described abnormal parenting behavior in mothers, which he called Munchausen syndrome by proxy (MSBP).[1] The behavior involved mothers who consciously deceived health care professionals into believing that the mothers' children were ill by giving false accounts of symptoms or signs or inducing symptoms in children. Professor Meadow believed that the mothers did this to gain attention for themselves. All his cases involved the presentation of children to hospital doctors.

Since then, there has been considerable research interest in this phenomenon, and many different

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types of false presentation have been described.[2,3] Once pediatricians started to look more carefully at how parents, especially mothers, presented their children for health care, it became clear that there is an enormous spectrum of what might be best thought of as abnormal illness behavior by proxy—that is, when a caregiver in charge of a dependent other elicits health care on the charge's behalf in an abnormal way.[4] Doctors play the essential role of validating illness[5] through diagnosis. They either validate the parental fears or reassure that nothing is wrong. Normal rules of illness behavior (in the West, at least) assume that the parent will accept the doctor's findings and comply with the advice given. Doctors, in turn, generally assume that what patients, and in this case, patients' parents, say is true.

However, if parents actively deceive doctors about their children's illnesses, then the normal doctor-patient relationship is fatally undermined in terms of expectable role. Pediatricians can find themselves in the role of possible crime investigators, who need a low threshold of suspicion.[6] This adversarial attitude extends into research as well as normal clinical practice. Researchers making a study of the causes of apnea attacks in infants found 14 cases in which the children's only breathing difficulties were the result of their parents' attempt to smother them.[7] This study led to another of a larger sample of children with breathing difficulties, including 39 cases in which the pediatricians were suspicious that the "apnea" was in fact child abuse. Police investigation showed that they were correct in 33 (84.16%) of the 39 cases.[8]

Professor Meadow himself[9] reviewed the deaths of 81 children who had been found by the criminal or family courts to have been killed by their parents. Most of these deaths had originally been categorized as sudden infant death syndrome (SIDS). There are several theories about why infants might suddenly die (genetically acquired thermoregulation problems, sleeping posture, toxic mattress content, or heart or respiratory problems) and some limited evidence for all of them.[10] But it is also clear that one cause of sudden infant death is murder and that, even if there are other possible causes, deliberate smothering by a parent is also a possibility.

We need not rely only on medical expert evidence for this assertion. Parents who have actually smothered their children may tell professionals that they have done so. Admittedly, this usually happens after the children have been removed from their care because of suspicions about poor care. Such admissions are often made to social workers or therapists and may not result in prosecutions. This means that these accounts are rarely published, either in court transcripts or in the academic press. Nevertheless, experts working in this field all have had experience of parents describing how they smothered their children. This is not to say that it happens often, but the fact that it happens at all is evidence that smothering is one cause of SIDS. There is also evidence from police investigations in hospitals. When there is a high index of suspicion, UK national guidelines on the management of child protection cases support the use of covert video surveillance by the police.[11] Research based on data extracted from this evidence has been published in peer-reviewed journals.[8,12]

Evidence-Based Medicine: "Lies, Damn Lies, and Statistics"

Because of his research experience, Professor Meadow has been frequently instructed by lawyers in relation to child protection cases, especially when there is uncertainty about the cause of the child's injuries or illness. In a recent case, it was alleged by the Crown that the mother had caused the death of her two children by some abusive means. The defense claimed that the children had died of SIDS. Numerous pediatric experts were called by both sides, of which Professor Meadow was one. He stated[13] that the experts agreed that the children had not died of SIDS (although they did disagree about what had caused the infants' deaths and the significance of the post-mortem findings).

At the trial, Professor Meadow cited a published statistic in his testimony, indicating that the chance of a second cot death happening in a middle class home was 1 in 73 million.[14] This figure has come back to haunt him. The mother was eventually convicted and went to prison. She appealed, and the first appeal failed. She appealed again (she was a lawyer, as was her husband) and was successful. This time on the grounds that a prosecution medical expert (not Professor Meadow) had failed to disclose evidence that might support a medical cause for her children's deaths. Throughout both appeals, the media repeatedly referred to Professor Meadow's statistic and ridiculed it as flawed and incredible. The appeals court also made reference to this statistic as "misleading evidence," even though it did not form the substance of the successful appeal. Since this second appeal, Professor Meadow has been the subject of extensive personal criticism. He has been reported to the General Medical Council on the grounds of alleged misconduct, and all the criminal cases in which he has given expert testimony are to be reviewed.

The more hysterical criticism of some medical experts claims that they set out to exert an unnaturally strong influence over juries in a deliberate way, to pursue their own mad ideas and promote their own careers. The less hysterical criticism states simply that medical experts can cease to be impartial in their evidence. The accusation is that the Professor is identified too much with the prosecution and molds his interpretation of the data to fit the prosecution's case. This identification with the cause, and not the facts of his opinion,[15] could mean that he either consciously or unconsciously gave misleading evidence to the court, which would be unprofessional behavior.

These criticisms of one expert witness should give pause for thought about what we should be doing when we appear in court. There are existing standards of ethics for experts participating in the justice process, which make it clear that the experts' primary duty is to the court and not to those who instruct them.[16,17] To perform a negligent examination or give false or misleading evidence, even if not deliberately, would violate several principles of medical ethics. This is hardly contentious. The contentious implications raised by Professor Meadow's experience relate to two aspects of expert testimony: first, the duty of the expert when there is real uncertainty in the scientific community, and second, the personal credibility of the expert and its influence in the courts.

Medicine-Based Evidence, Not Evidence-Based Medicine

The first problem lies in the different ways that clinicians approach medical facts. In relation to SIDS, in which there is real uncertainty about the cause of death in an infant, pediatricians act like scientists. As good scientists, doctors are taught to be parsimonious in their explanations of scientific facts, not to generate needless hypotheses when there are perfectly good explanations at hand. We are taught, in fact, to take an almost Sherlock Holmesian view of medical investigations, so that, when all investigations for all possible causes of illness have been performed, whatever explanation is left after all the others have been excluded must be the cause, however improbable. For pediatric experts, if all other medical causes of breathing difficulties have been excluded, then smothering must be a real possibility, and they testify thus in court.

The problem, however, is that smothering is not a diagnosis, but a crime. Detectives (like Sherlock Holmes) investigate crime (which is morally and legally deplored). Doctors investigate symptoms of diseases (which are meant to be value neutral). A person cannot be accused of having a disease. In fact, to have a disease is usually to be the subject of sympathy and concern.

A mother who smothers her infant is not necessarily mentally ill. She has demonstrated harmful behavior; she may or may not have a medical diagnosis as well. It cannot be said that she is suffering from smothering behavior, any more than it can be said that she suffers from blowing-nose syndrome or stone throwing. Thus, it makes no sense to ask, as the courts so often do, whether this mother "suffers" from MSBP, because MSBP is not a diagnosis with explanatory power.

Any psychiatric diagnosis in an abusive mother may be used as an explanation for her criminal behavior. It is clear that there is a relationship between some types of mental disorder and risk of criminal harm to others, and in such circumstances, any diagnosis comes to be seen as both an explanation for an odd event and, simultaneously, an accusation of a crime. The problem then is that one is accusing a mother who has lost a child of being responsible for that loss.

Courts, therefore, confuse mental disorders with behavior in ways that psychiatry does not. Courts also do not apply parsimony of explanation in analysis, especially in criminal cases. The case of *R. v. Cannings*[18] makes this abundantly clear. This was one of the cases recently reviewed because Professor Meadow gave evidence at the trial of Mrs. Cannings for the murder of her two children. The conviction has now been overturned, and in judgment, Lord Justice Judge specifically addresses the issue of parsimony of explanation:

> Throughout the [criminal] process great care must be taken not to allow the rarity of these sad events, standing on their own, to be subsumed into an assumption, or virtual assumption, that the dead infants were deliberately killed, or consciously or unconsciously to regard the inability of the defendant to produce

> some convincing explanation for these deaths as providing a measure of support for the Prosecution's case. If on examination of all the evidence every possible known cause has been excluded, the cause remains unknown [Ref. 18, ¶ 177].

The problem with this argument is that Lord Justice Judge appears to be stating that doctors must not include deliberate harm to a child in making a differential diagnosis. Although this fits philosophically with the premise that crime is not a diagnosis, it means that pediatricians should focus only on medical causes of symptoms, and if they cannot identify a medical cause, they should cease to consider the issue. This, however, is to abandon any involvement in child protection, which requires such consideration. Furthermore, both the courts and social services rely on the medical use of parsimonious explanation to trigger investigation. If there is no obvious disease to cause death, then crime may be the only obvious explanation. Even if the cause is an unknown disease not yet understood, the possibility that a crime has been committed is necessary for both police and social service investigations even to begin.

Of course, the child protection point of view is usually too close to the prosecution's point of view for adversarial comfort when it comes to the court. The family courts and the criminal courts are different theaters from an ethics viewpoint. One pursues the best interests of the child, the other pursues a truth beyond reasonable doubt. Pediatric evidence that concludes that smothering is the likely cause of a child's breathing problems clearly assists only one side in an adversarial hearing (although this is not necessarily evidence of bias on the part of the expert). The other side must use any means it can to cast doubt on the pediatric evidence, including undermining the credibility of the expert and advancing alternative explanations for the findings. The judgment in *Cannings* has given further support to this process, stating that if the outcome of a trial depends "exclusively or almost exclusively" on disagreement between medical experts, then "it will be unwise and unsafe to proceed" (Ref. 18, ¶ 178).

What if the defense case goes well beyond the current medical evidence base? In a recent case reported in the British press,[19] a father was charged with murder after his 10-week-old daughter died, with evidence of 32 separate fractures on her body. The defense argued that the father had been using a new scientific technique for feeding his daughter, called "assertive alimentation," which involved his overcoming her resistance to being fed with a bottle. There was no scientific evidence advanced to support this new technique; rather, there was only medical expert testimony that the fractures were consistent with significant force being used on the child. However, because of the judgment in *Cannings*, the trial was abandoned. The relationship between 32 fractures and the cause of death of a little girl is "unknown."

The Discreet Charm of the Expert: Personal Credibility

The other matter raised by the criticism of Professor Meadow is the extent to which experts are responsible for the impression they give of themselves in court—that when it comes to giving evidence, it is they who are convincing and not their testimony. Personal credibility is part of the evidentiary process, down to details such as dress code and demeanor. In an adversarial setting, both sides seek to undermine each others' testimony, and this can and will include undermining the personal credibility of the expert on several matters.[20] The jury decides which evidence it prefers, presumably affected by several factors, of which expert credibility is only one.

If the judge and jury find one expert more persuasive than the counterevidence, then this is part of due process. However, many people might find it alarming to think that personal standing and credibility matter more than science and justice when it comes to expert testimony, especially when there is real uncertainty about the scientific evidence. However, this is a phenomenon associated with all kinds of trials involving experts, not just child protection cases. It could be argued that it is a fault of the adversarial system that the personal attributes of the expert are not neutralized by the examination process, but this need not undermine the justice of the proceedings as a whole.

The counterargument is that if credibility of scientific evidence can rest on attributes as flimsy as personal appearance or charisma, then trust in the justice process as impartial begins to fade, especially trust in the testimony of medical experts. If the public still places high levels of trust in doctors (as surveys repeatedly show), then presumably one basis for that trust is a perceived lack of personal investment or wish for personal glory as the basis for professional altruism. If doctors acting as experts are after personal acclaim and kudos, then this undermines the perceived altruism that contributes to claims of impartiality and disinterestedness in the doctor-patient relationship.

Appelbaum[21] is undoubtedly right that justice is the trumping virtue in the ethics of the expert and that attention to truth and objectivity are essential for ethically justifiable practice by experts. But objectivity may be difficult in highly emotionally charged cases involving children. It may also be hard to be objective and truthful when there is really comparatively little evidence about which to be objective. One cause of sudden death in children is smothering, and expert pediatricians have every right to say so. It could be argued, however, that in that situation, an expert must be very sure that all other explanations have been explored and excluded, especially if they are contrary to his or her pet theory. There is a danger of experts becoming identified with their view in a way that reduces objectivity, especially if what is at stake appears to be the protection of the most vulnerable.

It is hard not to think that much of the hostility that the pediatric experts meet is caused by the fact that they are accusing those who are the most idealized among people, the mothers of small infants. It still seems to be very difficult for people to accept that mothers (or anyone in a mothering role) may have hostile feelings toward their infants, and reminders of this unpleasant message tend to result in attacks on the messenger. It is also interesting to note Lord Justice Judge's reference to the influence of "unconscious assumptions" in these cases. As a forensic psychotherapist, I am glad to see that the courts acknowledge that unconscious reasoning may be active in the criminal justice process, and I agree that this may affect how participants in the justice process see criminal defendants, especially in cases involving children. But I would add that unconscious process may also affect how experts are seen, and that much of the hostility toward experts like Professor Meadow arises from unconscious anxiety about criticizing parents.

The Limits of Testimony

There is another problem for the pediatricians in cases of unexplained infant death or illness—the pressure they come under to explain what has happened. This pressure may lead them to speak beyond their expertise. It could be said that Professor Meadow is not an expert in MSBP, despite the fact that he wrote the eponymous paper. Although an undoubted expert in the causes of ill health in children, he is not an expert in the field of child maltreatment, or all its causes, or its relationship with mental disorder. However, it is likely that, in the courtroom, he is put under pressure to be all these things.

My own work in this area has taken me frequently to the family courts in cases in which it is claimed that a child's unexplained illness is the result of abnormal illness behavior by the mother. I am repeatedly asked by lawyers to assess the mother in such a case, to see if she is "suffering" from MSBP. Leaving aside the fact that it is not possible to suffer from a behavior, it usually turns out that the cause of the child's illness is disputed, and the lawyers are then seeking to use psychiatric evidence to prove the facts, (i.e., if she "has" MSBP, then she must have done it).

Most forensic psychiatrists are wise to this type of ploy and quickly make it plain that psychiatric expertise cannot determine what happened when facts are disputed and that no diagnosis determines behavior, either past or future. In the family court, there will then be a need for a split hearing: the first part to make a finding of fact as to what happened to the child and the second to hear any relevant psychiatric testimony, once the facts are established. However, pediatric experts are necessary for the finding of fact because it is their evidence that will help the court to determine the cause of the child's injuries or illness. Without training or advice, they may be tempted (or pushed) to speak beyond their expertise, to comment on psychiatric issues in the parent or on treatment of psychiatric disorders, or even to identify a perpetrator where the perpetrator is unknown. I have witnessed pediatric experts giving just such evidence.

Not only is this going well beyond the remit of pediatric expertise, it is abandoning all scientific rigor. Although cohort studies of MSBP-perpetrating mothers suggest that personality disorder and factitious or somatizing disorders are overrepresented in this group,[22] these are data collected retrospectively. There is no evidence base that would allow one to state prospectively that the presence of any of these disorders makes the MSBP behavior more likely. Further, there is ample evidence that most individuals with such disorders do not exercise these behaviors with their children and that most MSBP behavior is displayed by psychiatrically normal people. Pediatric experts who make such statements in court would not accept this type of empirical analysis if it were presented in the same way to an editorial board for publication as a paper, but some apparently feel able to do so when it forms part of expert evidence. This may reflect the different ways that evidence is assessed by courts and journals—lay review of the personal charisma of the expert by the court as against peer review by anonymous reviewers.

The British courts have not examined the status and admissibility of expert testimony as the U.S. courts have, for example, in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*[23] The duties of the expert are set out in *Anglo Group Plc v. Winther Brown & Co Ltd.*[24] The expert should be able to provide evidence that is not clear to the ordinary person (*R. v. Turner*[25]). The test of the status of the medical evidence would probably mirror the test for negligence; it should reflect a reasonable body of medical opinion (*Bolam v. Friern Hospital Management Committee*[26]), which does not mean that there are not opposing opinions (*Maynard v. West Midlands Regional Health Authority*[27]) and it should be logical (*Bolitho (deceased) v. City & Hackney HA*[28]). On the *Bolitho* view, the type of retrospective inferences offered by some pediatric experts would fail on the grounds of logic.

There is no doubt, however, that both pediatric and psychiatric experts come under great pressure in the family courts to provide medical evidence that will determine who perpetrated the abuse on the child (once established). This expectation is a particular problem when more than one parent is suspected, and there are other vulnerable children in the family. The best interests of children require that they be protected from abusive parents, but it is not in their interests to be separated from a nonabusive parent. The anxiety in the family court to do the right thing is often almost palpable and may tempt experts to abandon both their objectivity and the empirical rigor that underpins it.

Protecting Children: Rocks and Hard Places

Currently, the British media, including the quality press and BBC radio, have gone on record as doubting the "existence" of Munchausen syndrome by proxy, stating that it is not a diagnosis but a theory without evidence promoted by one lone professional. As one radio presenter put it, "What is easier to believe: that a professor dreams up an unbelievable theory or that mothers actually harm their children?" Pediatricians have responded by pointing out that if they are to be vilified publicly for being suspicious and for participating in police or social service investigations of child abuse, then they will cease to do this work. Indeed, there is evidence that complaints against pediatricians have gone up (although they are rarely upheld)[29] and child protection posts are left unfilled.

But pediatric expert testimony is crucial in both the family and criminal courts. Professor Meadow and many other eminent pediatricians have been repeatedly instructed by the courts because of their research and clinical experience. There are no data available about how often which side instructed these experts. The recent publicized cases have dwelt on the fact that these experts often appear for the prosecution in criminal cases, which is perhaps unsurprising. In family cases, English courts now favor the appointment of a single joint expert, whose primary duty is to the court, to reduce the amount of expensive expert testimony and speed up procedures. The Royal College of Pediatricians and Child Health has set up a register of expert witnesses who will be trained and accredited by them.

These interventions will probably not address the problem of the unknown cause of death in a child, as raised by the judgment in *Cannings*.[18] At the time of writing, one mother whose murder conviction was going to appeal has just admitted that she did kill the child in question and a previous sibling.[30] Medical expert testimony is never likely to be flawless in its truth, any more than any other evidence. Perhaps much of the vilification of child protection experts comes because there is such a strong wish that they provide a "truth" for the court that will mean that children will always be safe and justice will always be done.

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