

Equivocal Court Cardiotocography Weighting in Cerebral Palsy Litigation

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Abstract

The article cones on one aspect of cerebral palsy court litigation, namely the ubiquitous non - reassuring CTG tracing interpretation and the jurisprudential weighting allotted to it. Such litigation contributes to a massive financial drain of National Health budgets and may inflict crippling financial punishments on doctors.

The author delves into a number of UK court cases, where medical malpractice is alleged to be the cause of the cerebral palsy and analyses these weightings which, overall give the impression of equivocity in such CTG weighting. Due consideration is given to the fact that the court hearing may have taken place decades after the actual birth management being analyzed, and this may have a bearing on the case e.g. decision as to prefer caesarean section or vaginal delivery in breech presentation. Two cases center around such breech delivery while a third case analysis the possibility of unconscious court misdirection by the plaintiff's counsel, himself wrongly over-weighting the importance of a possibly non-reassuring CTG when much bigger issues were at stake. One case of clear, jurisprudential non - equivocity is concluded.

The author stresses that court litigation should be wary, not only of the inherent defects associated with CTG (such as the low sensitivity and high inter- and intra-observer error rates of interpretation), but also of the very weighting to be allotted to the CTG itself. Only then, would the role affected by CTG in cerebral palsy litigation help in the fair swing of the scales of justice.

Keywords: Obstetric Litigation; Cerebral Palsy; Intra-Partum Cardio-tocography (CTG); Breech Delivery; Bolam Test; Bolitho Test; CTG Weighting

Abbreviations

OBGYN: Obstetrics and Gynaecology; NHSLA: National Health Service Litigation Authority; CTG: Cardio-tocography; EFM: Electronic Fetal Monitoring; FBS: Fetal Blood Sample; UK: United Kingdom.

Introduction

It is well-known that OBGYN is among the most high-risk of specialties with regard to malpractice claims [1]. Internationally, obstetricians and gynecologists are sued more frequently than practitioners in most other specialties; with awards against them reaching massive amounts [2]. Such disabling awards, as well as the requisite insurance premiums required to fulfill medical practice requirements, have crippling effects, both at personal, as well national health levels. They are known to encourage practice limitation or even its abandonment; while deterring new doctors from taking up the specialty. In the UK; obstetric litigation accounts for about 60–70% of the total (malpractice) sum paid by the NHS Litigation Authority (NHSLA) each year [3]. A substantial amount

of obstetric litigation involves the adverse outcome of the birth process which is the period of time of greatest challenge to fetal safety as well as to obstetric management [4]. In most countries; most allegations in obstetric lawsuits relate in some manner to the management of labor and delivery [5].

In the UK, between April 01, 2000 to March 31, 2010; three types of cases accounted for 70% of the total value: claims arising from mistakes in CTG interpretation, claims arising from mistakes in the management of labor and cases in which the outcome involved a child afflicted with cerebral palsy. There were 542 claims for cerebral palsy with a total value of paid and outstanding payments of 1.3 billion pounds sterling; reflecting the lifelong cost of future treatment and care [4].

Here we look at the contributory effect of court CTG analysis in cases of cerebral palsy to the court reasoning and final jurisprudential conclusion. Such weighting may or may not appear fair but rather than evaluate such; which is beyond author and reader's competence and remit, it is salutary to observe and reflect on such weighting. This is no empty exercise for intra-partum CTG monitoring remains the only practical, universally clinically available and reproducible aspect of Electronic Fetal Monitoring (EFM) of the unborn infant. In addition to CTG controversy, much challenge is now also leveled at Fetal Blood Sampling (FBS), which test may confirm or negate fetal hypoxia and acidosis in a case where a non-reassuring CTG, may only point to the potential of such pathology. In this context no points are won by joining the controversial fray of the tussle between FBS as a time honored (and still officially accepted) test versus its non - standing to evidence based practice. Also, although CTG monitoring can be performed both ante-natally and intra- partum and both are medico-legally very significant, it is the latter which often has the chief role in cerebral palsy litigation and which is considered in this article.

From the Courtrooms

CTG is acceptably surrounded by much controversy; including its inherent weaknesses such as its high specificity but low sensitivity, its high intra- and inter-observer error rate of interpretation and the need for court awareness of these and other drawbacks [6]. These controversies and defects have potential serious medico-legal implications, hence the need to respectfully but persistently draw the court's attention to them, if justice is to be helped prevail.

Here, we enter the UK courtroom and look at the weighting attached to intrapartum CTG as expressed by the final jurisprudential decision in specific cases of cerebral palsy litigation. Four cases are looked at; some a little closer than others. All; in their own way reflect the court's different attitude to intrapartum CTG, its final accepted analysis and clinical implications and finally, its influence on the judgment. One may draw different and controversial conclusions, but two points do emerge clearly, namely:

- The versatility of CTG interpretation -possibly contributed to; by CTG's inherent lack of interpretive objectivity.
- The apparent equivocity in the weighting of CTG evidence in cerebral palsy litigation. Indeed; one may draw a worrying parallel, which is different rather than causal; between the clinical high intra- and inter- observer error rate of CTG interpretation and the seeming equivocity of weighting in some court cases. By a high intra- observer error rate of interpretation, one means CTG's tendency to elicit different interpretations to the same CTG at different times from the same observer, while a high inter-observer rate of interpretation implies a worryingly high rate of different observers disagreeing about the same CTG tracing [7]. Likewise, as the following court case discussions will illustrate, it is remarkable how varied; nay equivocal; is the weighting or importance allotted by the courts to the relevance of a non-reassuring intrapartum CTG in deciding medical liability in cerebral palsy litigation.

Resting on Peer Practice

CTG has long been known to have a low sensitivity, so that its false positive rate may be as high as 99.8%; with only 0.19% of even severely non reassuring CTG tracings being associated with moderate or severe cerebral palsy [8]. In the worst case scenario of CTG abnormalities, hypoxia can only be confirmed in 50-60% of cases [9]. In court, the first battle is to prove the existence or the likely existence of fetal hypoxia. Once the court does agree that the non- reassuring CTG confirmed by FBS or not; is due to underlying fetal hypoxia, proving liability becomes much closer. Naturally the hypoxia must be linked to the plaintiff's damage and furthermore the defendant's actions must be proven negligent. But, the dogs of war will have definitely drawn closer to the prey.

Well; perplexity reigns supreme, when hypoxia is accepted as having been present by the court, which in the same breath also states that the plaintiff had been left with disabilities, but then court reasoning takes an unexpected twist. *Hinfey v Salford Health Authority* is one such case [10].

The fact that the plaintiff was starved of oxygen and left with disabilities as a consequence did not of itself justify a finding of negligence against the practitioner. It was important to remember that at the time of the plaintiff's birth less than 50% of breech presentations went on to caesarian section and no evidence had been laid before the court which indicated that the practitioner's decision not to depart from a widely accepted procedure amounted to negligence in the circumstances. The lapse of time between the birth and the instigation of the action had inevitably increased the plaintiff's difficulty in providing sufficient evidence to discharge the burden of proof.

Here; the court accepts that the "plaintiff was starved of oxygen and left with disabilities". It also states that the lapse of time between the birth and the instigation of the action had inevitably increased the plaintiff's difficulty in providing sufficient evidence to discharge the burden of proof. The court shows its conviction that the plaintiff does have cerebral palsy as a result of being starved of oxygen at birth. But then; it seems to change tack. No one disputes the possibility that such hypoxic induced cerebral palsy may not have been the result of malpractice. However; the explanation put forward seems to generate a number of queries and comments both in the court's reasoning as well its final decision.

Without categorically stating it, the court seems to be applying the Bolam test [11] in which the court held that there is no breach of standard of care if a responsible body of similar professionals

supports the practice judged even if this did not comply with the established standard of care.

In *Hinfey v Salford Health Authority*; the court seems to be reasoning that the majority of peer practice (more than 50% we are told) would; at the time of occurrence of the birth incident; have opted for a vaginal breech delivery and not a Caesarean Section. The risk of hypoxia - the court reasoning seems to continue - is much more significant in a vaginal delivery; ergo; no malpractice has occurred.

A number of inevitable of points of query; do arise:

- Firstly; there is no doubt that it is possible for hypoxia to have been present and have caused cerebral palsy and yet; no medical negligence is present. In this case, the court's ruling states that this is so because peer practice would have favored a vaginal delivery as the defendant performed in this case. It seems to imply that choosing a vaginal breech delivery because it is based on peer practice majority, provides automatic immunity from liability, in the presence of an adverse birth outcome.
- The ruling speaks of an almost equally divided opinion of 50%. Yet; only the slightly larger group's opinion of "similar professionals" is being given consideration. A group of under 50% can hardly be considered insignificant and subsequently have its opinion ignored.
- The court seems to labor under the impression that this group of just above 50% would perform a vaginal breech delivery and not a C-section in a blind; determined fashion; no matter what. The ruling implies that this group would decide on and then embark on a vaginal delivery with a blind, hard-headed absence of prudent evaluation watching out for clinical pointers to help it decide to alter course. In reality, both now and in the past, the obstetrician opting for an initial decision for a vaginal delivery, observes numerous guidelines and precautions throughout the first stage of labor up until the birth has actually taking place.

Using Bolitho – or not Using Bolitho

In 1996, admittedly a good three years after *Hinfey v Salford Health Authority*, a case [12] would come up; the ruling of which would provide a key to overcoming one weakness of the Bolam test. An example of this weakness would involve the court seeking the opinion of a responsible body of similar professionals, who make a statement to the court, which does not make logical sense, such as that clinical death is reversible. The statement may carry the ipse dixit of a venerable majority of physicians, who, however venerable, are here stating balderdash. Applying the Bolam test as modified/enriched by the Bolitho test to this situation the court would reject this opinion statement in view of the illogicity of the statement. Yet, even in the absence of the Bolitho test; in *Hinfey v Salford Health Authority*, it stands to reason to ask:

- (1) What would be the line of action of the just over 50% group in the presence of evidence of hypoxia during a birth aiming at a vaginal outcome?
- (2) What is the weighting being accorded; not only to a non-reassuring CTG [11] indicative of potential fetal hypoxia but to clearly accepted detrimental oxygen starvation of the fetus? In fact, it seems clear that no weighting at all was allotted.

Carpe Diem

In *Smithers v Taunton and Somerset NHS Trust* [13], we also encounter a vaginal breech delivery resulting in a decree of absolutor for the defendant. In this case the CTG showed an unchallenged *profound fetal bradycardia (low fetal heart rate) associated with profound (fetal) fetal hypoxia*.

The infant was severely and extensively brain damaged; suffering from dystonic athetoid quadriplegic cerebral palsy with microcephaly, severe learning disabilities and cortical visual impairment. It was calculated that the recordable pathological CTG tracing spanned about 21 minutes. The court stated that in the presence of a “competing medical emergency”, the resultant delay in the delivery was not due to medical negligence. This is a somewhat more acceptable argument; especially for those who know how human limitations may be over-stretched, on a bad day, in a super - busy labor ward. One may of course; for argument’s sake, raise the point as to what arrangements were available as to staff and operating facilities, in a situation of potential and recurrent multiple simultaneous emergencies, but this is beyond the scope of the present discussion.

In contrast to *Smithers v Taunton and Somerset NHS Trust*, a 21 minute delayed response to an abnormal CTG was in the given circumstances; acceptable to the court in *L v West Midlands Strategic Health Authority* [14], a mere six minute recorded pathological intra-partum CTG tracing was enough for the court to find the defendant liable and guilty.

On the evidence the obstetrician should have arrived at 21.40 minutes. Further, a reasonably competent obstetrician arriving at 21.40 minutes would not have been outside the range of acceptable practice in the Bolam sense, if she had taken three minutes to reach her decision to intervene. A reasonably competent obstetrician at 21.43 having reached her decision to intervene would have been outside the range of acceptable practice if in the circumstances of the instant case, she had taken the time represented by more than one contraction (more than two minutes) to take any further steps to prepare for intervention. So she should have been ready to apply traction no later than five minutes after arrival. Accordingly, on the balance of probabilities the time required for delivery should have been and (in so far as it depended upon the circumstances of mother and baby) would have been nine minutes with the result that the claimant would have been delivered at 21.49 and resuscitated at 21.50; some six minutes sooner than was in fact the case.

Just a Simple Matter of Perspective

At times, CTG weighting is given unexpected preponderance seemingly at the cost of grossly more striking factors. The impression may be gathered from certain case law examples that the Court may wrongly (with all due deference) assume that management of CTG tracings is some fine - tuned gauge of obstetric performance in labor.

Gossland v East of England Strategic Health Authority [15] was a complex case where the plaintiff was a 17-year-old boy suffering from asymmetrical quadriplegic cerebral palsy. The court ruled on non-liability; in spite of the fact that at birth. The child

- Was abnormally large at 5.22 kg at birth.
- Underwent a rotational forceps with alleged excessive force was employed for the delivery
- Suffered shoulder dystocia.
- And subsequently; a fractured clavicle.

In its conclusion; the court coned on the intra-partum CTG which itself had been contested as abnormal by the plaintiff’s defense:

The cardiotocograph trace was not such as to lead an obstetrician of ordinary competence to take the view that Omar had a ‘complicated tachycardia’ such as to make it imprudent to administer oxytocin or to make it mandatory to take a blood sample from Omar’s scalp. The cardiotocograph trace showed a tachycardia aptly described by Mr MacKenzie as a ‘moderate’ one which could not properly be characterized as a complicated tachycardia. In Dr Emmerson’s words it was ‘somewhat abnormal’ but nevertheless ‘a common occurrence’.

The court accepted the defendant’s view that it was a spontaneous hemorrhagic infarction which had given rise to the plaintiff’s cerebral palsy.

So, here with a multitude of obstetric manoeuvres resulting in multiple damage, in addition to asymmetrical quadriplegic cerebral palsy a questionable CTG takes the concluding centre stage and is evaluated at best as ‘somewhat abnormal’ but ‘a common occurrence’ and all is well with the world.

However, to be fair besides the case’s complexity other factors have to be considered, one of which was the weakening of the plaintiff’s expert witness’ testimony by his admitting under cross-examination to having misread some of the medical records. He also admitted to resorting to both exaggeration and hyperbole in his report.

Another factor which I believe may have significantly contributed to the court’s final decision was the argumentation of the plaintiff’s defense stressing the non-reassuring CTG and how it merited the taking of a fetal blood sample. Judging by the end result, one hardly doubts the validity of this argument but CTG argumentation here probably served to misdirect the court’s attention from far more serious issues. Issues like the performance of a traumatic Kiellands rotational forceps on a massive baby which procedure was followed by shoulder dystocia and a fractured clavicle. Plaintiff’s counsel could have had a field day emphasizing a missed diagnosis of a large baby both in labor as well as in the preceding ante-natal care. Were ultra-sound scans performed ante-natally? [16] Could diabetes have been present and missed? Was maternal blood glucose ever checked? Were there signs of cephalopelvic disproportion like excessive fetal head moulding in labour? At what station was the fetal head when the forceps were applied? How much of the fetal head was palpable abdominally? And so on and so forth. All of which would have been most justifiable central argumentation with any CTG evaluation included as the cherry on the cake.

Non Equivocity

In *Pauline McKenzie Pursuer vs Fife Acute Hospitals NHS Trust Defenders* [17]; we find a healthy example of jurisprudential NON equivocity by the court in allotting due and balanced weight to CTG evidence. The jurisprudential conclusions are fair and appear to be fair. The plaintiff was acting for her son; a twelve-year-old boy with Cerebral Palsy, born at 23.44 hours on 25 February 1994. The birth was associated with a non-reassuring CTG not only not corroborated by FBS but accompanied by persistent uterine stimulation with syntocinon. The defendant accepted liability of fetal damage by delivery not being affected by 21.40 hours [18] on 25 February 1994. Lord Hodge’s scientific exposition of many related factors including CTG is a veritable pleasure to read. He also evaluates some of the pitfalls of intra-partum CTG; not a common exposition at jurisprudential level. One extremely carefully worded statement ought to be enshrined in cerebral palsy litigation. Lord Hodge refers to the CTG monitor as a sensitive instrument and is able to pick up events which have the potential to cause brain damage although it is not specific as to the nature of those incidents.

Conclusion

Although there is no doubt that the obstetric world has no current alternative to CTG monitoring, this investigation may be rendered potentially grossly misleading; at both medical and medico-legal level. Cerebral palsy litigation centering on CTG evidence of potential hypoxia is fraught with inherent scientific pitfalls which may be unconsciously jurisprudentially compounded. Court retrospective obstetric management analysis may be extremely difficult and complex. Great prudence is required not only in interpreting and evaluating the CTG in question, but equally critically, in allotting fair weighting to the CTG in the legal argumentation. This applies both to the venerable court as well as to the legal advisors of both plaintiff and defendant.

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