

**Case Note: *AXO v Salisbury NHS Foundation Trust* [2019] EWHC
1454 (QB)**

Mrs Justice Yip considered the issue of causation in this clinical negligence case. Her conclusions act as a reminder that whilst temporal proximity is a necessary requirement if causation is to be established, it cannot by itself establish a causal link.

The Claimant was represented by Simeon Maskrey QC and Harry Trusted instructed by Price Gawne and the Defendant by David Pittaway QC instructed by DAC Beachcroft.

The facts

The claim was brought by AXO, a boy born prematurely at Salisbury General Hospital in 2008. Shortly after his birth he received a tenfold overdose of pancuronium bromide, a muscle relaxant used to facilitate mechanical ventilation. It was alleged that this caused AXO to sustain significant brain damage which resulted in cerebral palsy.

The Trust admitted that the overdose was administered negligently. Further, it was agreed between the parties that periventricular leukomalacia (“PVL”) is an indivisible injury such that the test to be applied was whether the pancuronium bromide overdose made a material contribution to the development of this condition.

It was the Claimant’s case that AXO suffered two insults to his brain, both of which were said to have been contributed to by the overdose.

The issues

Mrs Justice Yip set out that “the Claimant must prove that the overdose made a material contribution to the injury on a balance of probabilities. The Claimant does not need to prove the mechanism by which the overdoes caused damage, only that it did so. However, consideration of the respective opinions on the mechanism of damage is inevitably required

before arriving at any conclusions. The balance of probabilities is just that. It does not require medical certainty, or indeed anything approaching that [28].”

There were two episodes of hypotension which the experts agreed materially contributed to the PVL. The first occurred shortly after the pancuronium was administered and the second, during the process of transferring AXO to Portsmouth. As such, the issues to be determined were:

1. Whether, on balance, AXO suffered hypotension as a result of the overdose. (Which required a finding as to whether, on balance, AXO suffered a significant fall in blood pressure after the administration of the overdose.)
2. Whether the overdose contributed to AXO’s inability to withstand the accidental and non-negligent extubation that occurred when he was being transferred.

The Claimant had contended that the transfer was itself caused by the overdose and consequently that the Defendant was responsible for what occurred during the transfer, including extubation. However, during cross examination by David Pittaway QC, it was accepted by the Claimant’s consultant neonatologist, Professor Mitchell that, on balance, AXO was likely to have been transferred in any event.

Further significant concessions from Professor Mitchell, which proved to be key to Mrs Justice Yip’s dismissal of the claim, again came during cross examination. The Professor accepted first that a therapeutic dose of pancuronium will cause total paralysis in the majority of neonates therefore, for the majority of babies, the effect of an overdose would be no greater than the therapeutic dose, but it will last longer. In addition, that he could not say whether it was Curosurf, (another drug administered just prior to the overdose) or the pancuronium or a combination of both which caused the first incidence of hypotension.

The evidence of the Defendant’s consultant neonatologist, Dr Hawdon, was found to be more compelling.

Conclusions

Mrs Justice Yip held that:

- The Claimant was unable to establish a causal link between the overdose and the first damaging incidence of hypotension. [111]
- Unstable respiratory status and a requirement for treatment for hypotension are characteristic of severe lung disease of prematurity. [112]
- Professor Mitchell relied too heavily on the temporal link when the evidence only established that these events occurred around the same time, not necessarily that the fall in blood pressure immediately followed the overdose. [123]
- Professor Mitchell's explanation as to the mechanism by which an overdose of pancuronium would cause the rapid onset of hypotension did not withstand cross-examination. Having accepted that the majority of neonates would be fully paralysed by a therapeutic dose of the drug, his explanation that the overdose caused a greater loss of muscle tone could not be maintained. [150]
- AXO's prematurity and perinatal course were sufficient to explain his neurological injury. [146]

Additional points to note

This case involved complex issues of fact and causation. While it was natural to consider that there was a link between the significant overdose of pancuronium and the Claimant's severe neurological injury, the evidence did not establish the relevant causal connection. The Claimant's cerebral palsy could be explained by his prematurity and perinatal course.

We are reminded of the damage that can be done by effective cross examination of expert witnesses as well as the importance of ensuring that experts do not stray beyond their areas of expertise. Particularly where that leads to admissions that parts of their evidence are based upon "undergraduate medicine" with "no directly relevant experience for 20 years" [55].

In addition, inconsistencies in the factual evidence of the treating physician and a reconstruction that is “not entirely objective or reliable” will not necessarily be fatal. Mrs Justice Yip made allowances when considering the evidence of the treating physician on the basis that “his evidence was coloured by a natural human reaction to the suggestion that something for which he was responsible could have caused AXO serious long-term disability”. It is important to look closely at all of the evidence when considering the prospects of success and not to be overly pessimistic where flaws in the factual evidence can be remedied by the records and or the experts.

Case note by Clementine Coram James

Hailsham Chambers, June 2019