the Verdict

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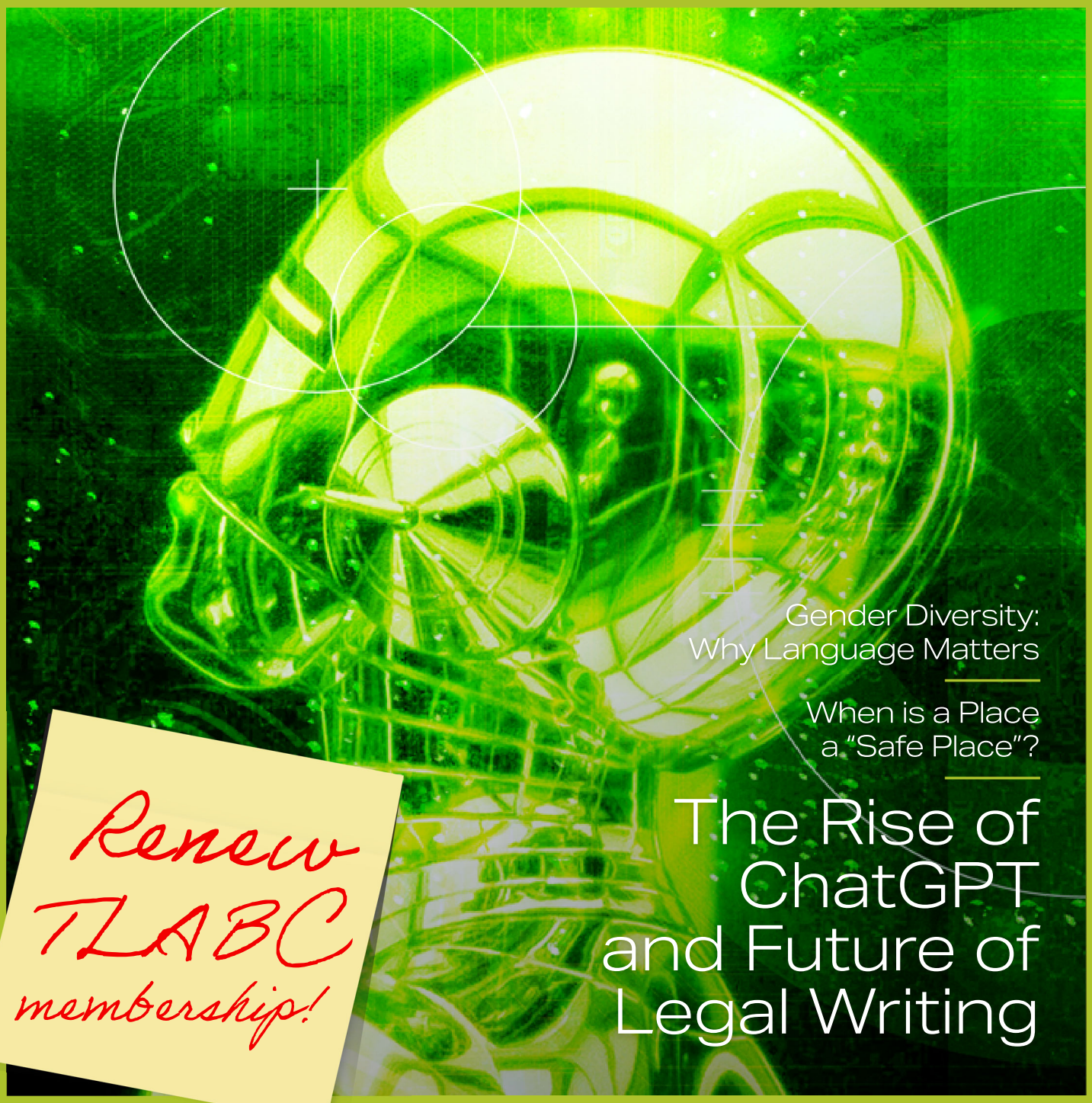

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MEDICAL MALPRACTICE ▸

Causation in Birth Injury Cases

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TLABC Member

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This is the sixth article in our series aimed at providing a detailed examination of the challenges and pitfalls in different types of medical negligence lawsuits and approaches to overcoming them. Each article will focus on specific injuries and will highlight the obstacles a plaintiff faces in bringing their case to a successful conclusion. By comparing cases involving similar injuries, we hope to illustrate how the plaintiff succeeded, and, when they did not, strategies that may have been available to improve their chance of success.

This article will focus on causation in birth injury cases and, specifically, issues related to proving that different treatment would have been available if appropriate care had been provided and the treatment available would likely have avoided the outcome.

Introduction

Causation defences in birth injury cases were, historically, somewhat rare. The focus in the past seemed to be more on defending the care provided rather than building up a strong defence that, even if the medical practitioner provided inadequate care, the plaintiff had failed to prove the causal connection between that care and the ongoing injuries. In more recent birth injury litigation, causation defences arise in most, if not all, cases.

Causation can be difficult to prove in any medical case; there is simply so much that is still unknown in medicine. This uncertainty, despite all the advances that have been made in science and technology can make it impossible for a plaintiff to prove the factual cause of an injury, let alone the legal cause.

In birth injury cases, the uncertainties are even greater. With adult patients, the physician can speak to the patient and collect a history including past medical issues and current symptoms. The physician can observe the condition of the patient and perform a physical assessment. Blood can be drawn, urine samples can be obtained, lumbar punctures can be performed. These routine tests all provide additional information as to what is happening with the patient. Care for an unborn child is drastically different. Most of the information as to the health and wellbeing of the fetus is obtained from ultrasound images, the presence or absence of fetal movement and an assessment of the fetal heart rate. Direct assessments of a fetus, if even possible, carry significant risks (including miscarriage) and are therefore quite rare. The limitations on the information available to medical practitioners can make it extremely difficult, or impossible, to establish when and how an injury occurred.

In addition, the process of childbirth carries many risks to the fetus from numerous potential non-negligent sources. An oft cited quote from Lord Denning appears in the defence submissions in many birth injury claims:

> Being born is dangerous for the baby. So much so that an eminent professor in this case tells us that: 'Throughout history, birth has been the most dangerous event in the life of an individual and medical science has

> not yet succeeded in eliminating that danger.' He parodies the psalmist by referring to 'valley of the shadow of birth'.
>
> This has its legal consequences. It follows that, when a baby is stillborn or dies soon after birth or is born damaged or deformed, that fact is no evidence of negligence on the part of the doctors or nurses attending the birth. It does not speak for itself. The maxim *res ipsa loquitur* does not apply.[1]

Within this valley of the shadow of birth, identifying the factual cause of an injury and then linking that injury to inadequate care is frequently the most challenging part of the case.

The Legal Principles

The law on causation is clear and usually not in dispute. The plaintiff must prove, on the balance of probabilities, the defendant's act (or failure to act) caused the injury. The generally applicable test is the "but for" test; the plaintiff must "show that the injury would not have occurred but for the negligence of the defendant."[2] The plaintiff is required to lead sufficient evidence to establish, using a robust and pragmatic approach to the assessment, that the defendant's negligence was the cause, both in fact and in law, of the injuries sustained.[3] The plaintiff must establish that the defendant's negligence was necessary to bring about the injury (the injury would not have occurred without this negligence).[4] The defendant's wrong need not be the sole cause of the loss, but it must be part of the cause. "But for" causation raises the counterfactual question: what would likely have happened if the defendant had discharged his or her duty? Properly understood, "but for" causation simply means causation in fact.[5]

One of the issues that often arises with clients seeking to pursue a medical malpractice claim is the possibility of a better outcome. If, for example, expectant management (a 'wait and see' approach) led a child to sustain birth injuries and the experts agree the patient should have been actively treated, any parent will tell you they wanted the active treatment, no matter the risks. If the active treatment only offered a 25% chance of avoiding or improving the outcome, they cannot succeed in a medical malpractice claim, a concept that can be difficult to comprehend on an emotional level. The law is summarized by Adair J. in *Wiebe*:[6]

> [115] It is not enough for a plaintiff to establish that a medical outcome might have been better had the defendant(s) acted differently. The trier of fact must be convinced by the evidence that the outcome probably would have been more favourable in order to be satisfied of causation on a balance of probabilities. See Seatle et al. v. Purvis et al., 2005 BCSC 1567, at para. 145, aff'd 2007 BCCA 349.
>
> [116] Moreover, as Beames J. observed in *Jackson v. Kelowna General Hospital et al.*, 2006 BCSC 279, at para. 33, aff'd 2007 BCCA 129:
>
> [33] The plaintiff cannot meet the onus upon him to prove causation by merely proving the loss of a chance (*Cottrelle*, supra, at para. 36). Similarly, it is not enough for a plaintiff to prove that the defendants "created a risk scenario within which the plaintiff's pain, suffering and losses [have] occurred" (*Oliver (Public Trustee of) v. Ellison, [1998] B.C.J. No. 589 (S.C.), at paras. 31-33; St-Jean v. Mercier*, 2002 SCC 15, [2002] 1 S.C.R. 491 at para. 116).

Examples in the Caselaw

K.S. (Litigation Representative of) v. Willox, is a prime example of the loss of chance being insufficient to ground a claim, despite a known treatment that may have drastically altered the child's outcome and avoided a catastrophic injury.[7] In K.S., the plaintiff was a 15-year-old boy with severe cognitive deficits, limited vision in one eye, hypersensitivity to external stimuli and severe Autism Spectrum Disorder. The lawsuit revolved around the care K.S.'s mother, J.S., received during her pregnancy. J.S. was pregnant for the first time and cared for by Dr. Willox during her pregnancy. She advised him that her own mother had an incompetent cervix, had miscarried at least once and had received cervical cerclage for her pregnancies with J.S. and her siblings. Dr. Willox told J.S. that an incompetent cervix was not genetic. During her pregnancy, J.S. attended hospital and Dr. Willox's office for a few concerns, including passing a clot, vaginal discharge and spotting.

The critical issues in this case related to a routine ultrasound performed on October 3, 2000. The ultrasound showed that the internal cervical os (located at the top of the cervical canal near the uterus) was open with fluid bulging towards the os. One possible cause of this could be an incompetent cervix. J.S. asked Dr. Willox about cervical cerclage (stitching the cervix closed to prolong the pregnancy). Dr. Willox assessed J.S. and determined that the external cervical os (located at the bottom of the cervical canal near the vagina) was closed. He consulted Dr. Muir, an obstetrician, who advised expectant management. J.S. attended Peace River Hospital on October 22, 2000, with mild contractions. She was transported to a hospital in Edmonton where she was started on medication to try to avoid early delivery but it was unsuccessful. R.S. was 23 weeks gestational age and weighed less than 1"½ pounds.

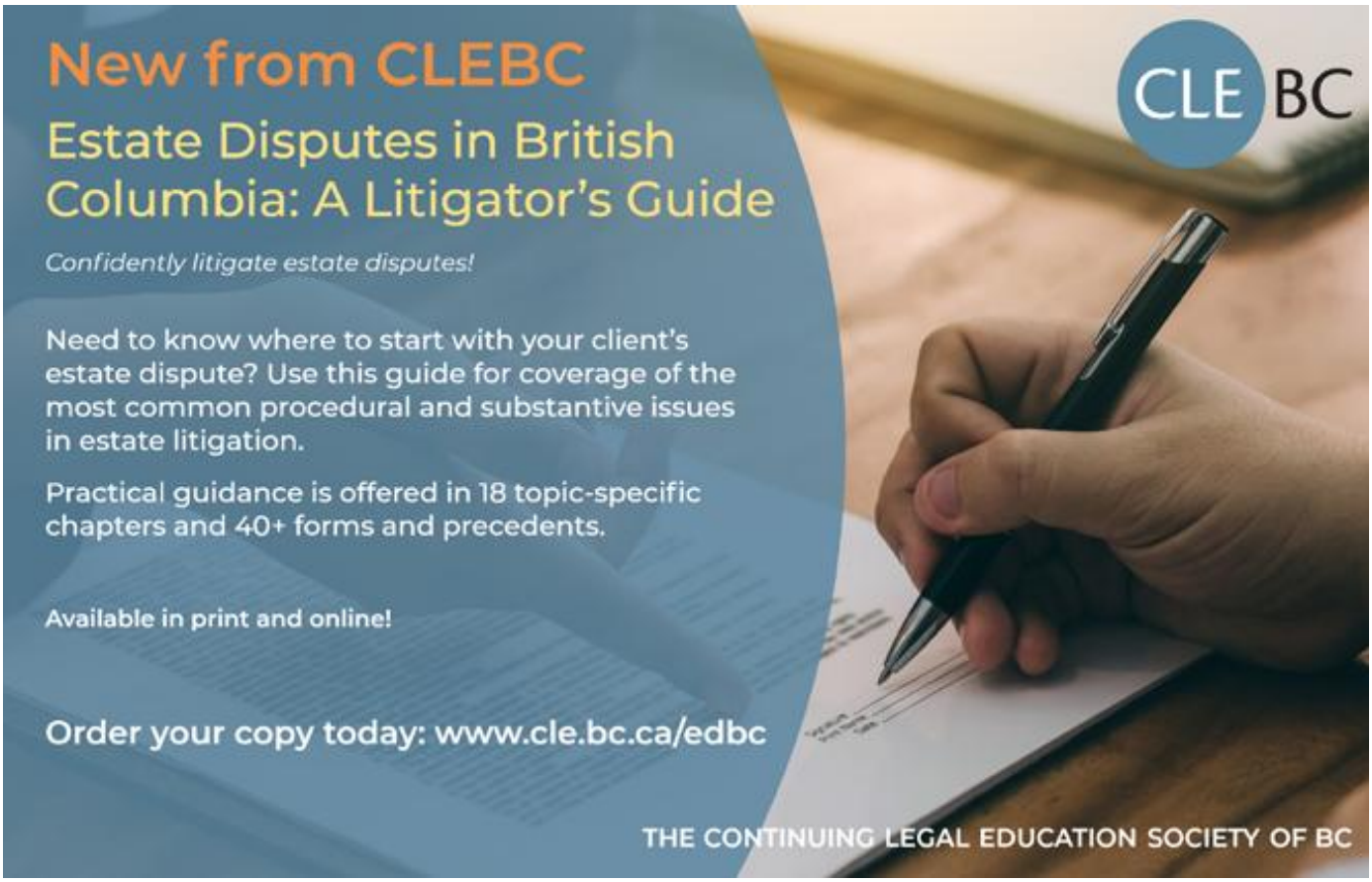
Moreau J. found that the expectant management plan met the standard of care, but Dr. Willox breached the standard of care by failing to order weekly clinical examinations and serial ultrasounds at least every two weeks. In addition, when J.S. was having discharge that was consistent with passing the mucus plug per vagina and, a week later, when J.S. had bloody mucusy discharge, Dr. Willox breached the standard of care by failing to consider that this may to be a sign of progressive changes to the cervix. These changes could not be evaluated by clinical examination alone and may have warranted cervical cerclage. In order to meet the standard of care, Dr. Willox was required to schedule ultrasounds

immediately after this mucusy discharge was noted and to consult again with an obstetrician about this new symptom.

K.S. nevertheless failed to prove causation. The first causation issue was whether K.S.'s preterm birth was caused by an incompetent cervix (which could be treated by cervical cerclage) or caused by an infection. The defence theory of the case was that the mom and fetus had an infection that led to the preterm delivery. Their expert testified that the most common cause of pre-term birth is infection. The plaintiff's theory of the case was that the infection occurred not long before delivery because of exposure to vaginal bacteria after J.S.'s cervix started to open due to cervical incompetence. Moreau J. accepted that the dilatation of J.S.'s cervix (preceded by the opening of the internal cervical os and funnelling of the membranes into the cervical canal) was more likely the result of an incompetent cervix than a pre-existing subclinical infection. The plaintiff's theory that the infection was caused by the dilatation of the cervix and exposure to vaginal flora was accepted. Moreau J. found that it was more probable than not that J.S. had an incompetent cervix and that the incompetent cervix caused the pre-term delivery of K.S.

Unfortunately, for the plaintiff, his claim failed on a series of other causation issues. Moreau J. found that for patients like J.S., with no history of preterm birth, cerclage was not being offered in October 2000 based on ultrasound findings alone, with no other symptoms. Emergency cerclage was an option once J.S.'s cervix started to open but this was a very short window in her case. J.S.'s cervix started to open sometime between her October 20 appointment with Dr. Willox and her midday presentation to Peace River Hospital on October 22, at which time her cervix was already seven centimetres dilated. By the time she arrived in hospital, emergency cerclage was no longer possible. It was not a viable option if there was suspicion of infection, labour, or imminent delivery. Given that cerclage is contraindicated when infection is present, Moreau J. considered whether emergency cerclage would have prevented the infection that did occur in this case. She found that it was unclear whether the infection could have been prevented had the emergency cerclage been performed in the very short window of time after J.S.'s cervix started to open and when K.S. was born. As a result, the plaintiff had failed to meet the burden of proof.

The final issue to be considered, although ultimately irrelevant due to the finding that emergency cerclage would not have been performed, was the cause of K.S.'s brain injury. The plaintiff had more success on this issue. There was some suggestion that infection was the cause of the brain injury. Moreau J. accepted the plaintiff's expert's opinion it was more probable than not that at the time of his birth, K.S. did not have an active infection that caused the damage to the white matter of his brain and other neurological



injuries. She accepted that the progressive deterioration of the white matter of K.S.'s brain more probably occurred after his delivery and was the combined result of his extreme prematurity and the resuscitation procedures required in the first hours and days after delivery. The court also accepted that the Autism Spectrum Disorder was part of the prematurity related brain injury.

Medina (Litigation guardian of) v. Wong is another birth injury case that could not overcome the causation hurdle.[8] The plaintiff, Cesar Medina was a five-year-old boy who sustained a catastrophic brain injury leading to cerebral palsy. As mentioned above, the fetal heart rate is one of the few available sources of information about fetal wellbeing during pregnancy, labour, and delivery. The issue in this case was whether the medical team was negligent in their interpretation of the fetal heart monitoring strips and whether the plaintiff ought to have been delivered much earlier than he was. Ultimately, Cesar Medina was delivered by emergency caesarean section in response to fetal heart rate abnormalities, but the plaintiff's claim was that the delivery failed to occur in a timely manner and that earlier delivery would have avoided or minimized the plaintiff's injuries.

Episodes of relative hypoxia are a regular part of childbirth. The mother's contractions restrict blood supply and oxygen delivery to the fetus. When the contraction ends, the baby can catch its breath (so to speak) and withstand these interruptions in oxygenation. When the periods of reduced oxygenation continue for longer, or the fetus has reduced capacity to recover from them, there are certain mechanisms the fetus can use to compensate for the reduced oxygenation and avoid injury. At some point, however, the level of hypoxia will overwhelm the infant's ability to compensate and brain injury will occur on an exponentially increasing basis.

There are different types of brain injuries that occur under different conditions. If the hypoxia is mild but prolonged, particular parts of the infant brain will be injured. If the hypoxia is severe, different parts of the brain will be injured (and a baby can only survive a short time in these conditions). In Medina, the plaintiff's theory of causation was that the fetus was compensating for an ongoing reduction in oxygenation until the last 14 minutes of the labour at which time his ability to compensate ended and brain injury set in. The plaintiff argued that he had sustained an acute profound (short but severe) hypoxic-ischemic injury minutes before delivery. The defendants' theory of causation was that the infant had an infection that resulted in impaired placental blood flow and impaired oxygenation in the 12-36 hours prior to delivery. They denied the existence of a severe acute event that could have caused injury at the very end of the labour.

The court found that the plaintiff had not met the burden of

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proof. The existence of hypoxia alone is not enough to cause brain injury unless it overwhelms the fetus's ability to compensate and the fetus is no longer able to cope with it. Abrioux J. held that the plaintiff had not established that the fetus was unable to compensate for the hypoxia in the minutes before birth. The court held that the plaintiffs had not established that an acute hypoxic-ischemic injury occurred. The plaintiff also argued that he was a "thin skull," more susceptible to hypoxia due to intrapartum infection. Abrioux J. found that the inflammatory response from the infection was initiated 12-36 hours prior to birth and the fetus was still compensating at the time of delivery so he was unable to conclude that any damage flowing from that vulnerability would have been avoided if the plaintiff was delivered an hour earlier. Abrioux J. also indicated that the vulnerability from the earlier inflammatory response to the infection may have been the primary cause of the injury.

Medina and K.S. demonstrate some of the many causation complexities in birth injury cases. This is not to say, however, that causation is insurmountable in all cases. When sufficient information is available, it may be possible to link the negligent care to the injury suffered and establish that "but for" the negligence, the injury would have been avoided. Our previous article in this series, on the standard of care in birth injury cases, discussed *Ediger (Guardian ad litem of) v. Johnston*, a case involving an attempted mid-level forceps delivery.[9] The forceps delivery failed, and Dr. Johnston left the room to arrange for a caesarean delivery. Minutes later, the fetal heart rate plummeted into a persistent bradycardia and never recovered. The plaintiff, Cassidy Ediger, was delivered by caesarean section eighteen minutes later but suffered a severe brain injury resulting in spastic quadriplegic cerebral palsy. At trial, the court found that Dr. Johnston's failure to ensure surgical backup was immediately available in the event of a bradycardia following the mid-level forceps procedure resulted in the plaintiff's severe brain injury.

The defendant's wrong need not be the sole cause of the loss, but it must be part of the cause. "But for" causation raises the counterfactual question: what would likely have happened if the defendant had discharged his or her duty?

The BC Court of Appeal allowed the defendant's appeal. First, the Court of Appeal held that the evidence did not support the trial judge's conclusion that the attempted forceps delivery caused the bradycardia. In the court's analysis, cord compression from the forceps delivery would have resulted in a bradycardia almost simultaneous with the attempt, not a few minutes later, after Dr. Johnston had left the room. If the forceps did not cause the bradycardia, Dr. Johnston's breaches of the standard of care leading up to the procedure were not a "but for" cause of the plaintiff's injuries as the bradycardia could have occurred in any event. Second, the Court of Appeal held that, although injury would have been avoided if the plaintiff had been delivered 10 minutes earlier, it had not been established that the delivery would have happened any sooner if Dr. Johnston had arranged for immediately available surgical backup.

The appeal to the Supreme Court of Canada was on the issue of causation. The Supreme Court of Canada allowed the appeal and upheld the trial judge's decision. The court held that the trial judge did not err in accepting that the bradycardia was caused by the forceps displacing the baby's head such that the umbilical cord could slip into the space and become trapped. With the next maternal contraction, the cord would then be compressed, cutting off the baby's blood and oxygen supply. The Supreme Court of Canada held that it was acceptable for the trial judge to accept the plaintiff's theory of causation after weighing the evidence, including the physiology of labour, the known risk of cord compression with mid-level forceps procedures and the close proximity in time between the application of the forceps and the onset of bradycardia.

Furthermore, the court held that the trial judge did not err in accepting that the injury could have been avoided if Dr. Johnston had arranged for immediately available surgical backup. The defence interpretation of "immediately available" was that Dr. Johnston was only required to ensure the anaesthetist was not engaged in a surgery at the time of the forceps procedure. The Supreme Court of Canada rejected this interpretation. While it was accepted that the presence of the anaesthetist alone would not have led to delivery in time to avoid the brain injury, Dr. Johnston could not avoid liability based on this reality. If it was accepted that surgical backup "immediately available" meant only availability of the anaesthetist, the physician would never be liable for breaching the standard of care when fetal bradycardia occurred and the bradycardia would lead to injury in all cases. It would impose a standard of care in response to the risk of bradycardia that would make no material difference to the ability to respond to the bradycardia. The Supreme Court of Canada interpreted the trial judge's reasons differently: the trial judge contemplated a standard of care that was responsive to the recognized risk of fetal bradycardia in mid-level forceps procedures and required reasonable precautions to allow for delivery without injury if a bradycardia indeed occurred. The risk could not be disregarded. The failure of Dr. Johnston to take precautions caused a delay in delivery and as a result caused injury from the bradycardia.

Conclusion

As can be seen from the examples discussed in this article, advancing a medical malpractice claim for a birth injury requires careful consideration of, and expert evidence, on the causal link between the criticized care and the injuries of the plaintiff. The uncertainties in medicine, particularly with respect to the timing and source of injuries sustained prior to the birth of a child, make causation a key issue in these cases. Those same uncertainties can make it difficult for parents to accept that, although the physician, nurse or midwife erred and mishandled their medical care and their child suffered an injury, they will not receive compensation because there is insufficient evidence to prove a link on the balance of probabilities. It is incumbent on the legal team to ensure they understand the medical issues at play and to work with their experts to compile a solid and convincing explanation for how the breach of the standard care, more likely than not, caused the child's injury.

1 Whitehouse v. Jordan and another, [1980] 1 All ER 650 at 652 (C.A.), aff'd [1981] 1 All ER 267 (H.L.)
2 Clements v. Clements, 2012 SCC 32, [2012] 2 SCR 181.
3 Wiebe v. Fraser Health Authority, 2018 BCSC 1710 at para 114
4 Wiebe, supra at 113
5 Stirrett v. Cheema, 2020 ONCA 288
6 Wiebe, supra
7 [2016] A.J. No. 867
8 [2018] B.C.J. No. 334
9 2013 SCC 18

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