Commentary

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Childbirth Injuries: an issue fraught with risks from the health care and medicolegal perspectives

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Abstract

Birth injuries caused by medical negligence are a real threat for mothers and their children, which can entail catastrophic, life-changing consequences, permanent disability, or even death. Families almost always seek redress from doctors and/or facilities, but in order for a birth injury malpractice claim to be successful, it needs to be proven that the medical care providers owed a duty to the child and that they were derelict in that duty and did not meet the proper standard of care; Furthermore, a causal relationship needs to be established between injury sustained by the child and the physician's or provider's breach of duty to the child. Relevant scientific articles have been collected by drawing upon medical search engines and archives such as Medline, Cochrane Central, Scopus, Web of Science, Science Direct, EMBASE and Google Scholar, through December 2019, using keywords such as "birth injuries", "malpractice", "claims". Moreover, the Authors have delved into legal databases (Justia, Lexis, De Jure, Leagle), identifying 6 meaningful instances of court cases centered around birth injuries with severe consequences, all stemming from malpractice and negligence. Ultimately, it can be concluded that demonstrable and adequately documented compliance with well-established guidelines and/or best practices are a determining factor in the legal defence of health care operators; that in turn can go a long way towards discouraging meritless claims and frivolous lawsuits, which constitute a challenging issue raising health care costs in many countries. ***Clin Ter 2020; 171 (3):e229-234. doi: 10.7417/CT.2020.2218***

Key words: *birth injuries, risk factors, child trauma, malpractice, litigation*

Introduction

Giving birth to a child should be one of the happiest moments in a mother's life. An average of 4 million births occur in the United States each year, i.e. nearly 11,000 births per day (1), as opposed to 5.075 million children born in the EU-28 in 2017 (2). As many as 23,000 newborn children perish annually in the US, due to congenital disorders, premature birth, and pregnancy complications (3). Maternity care should be among the top priorities of us as a society. Nonetheless, judging by the rates of birth trauma and fetal/maternal injuries, it is safe to assume that many countries, including developed nations, consistently fall short in this significant area. In low- and middle-income countries, child labor and delivery are certainly major public health concerns, associated with birth trauma and injuries leading to adverse physical and mental health outcomes (4).

Birth defects, caused by a health condition or illness that form while a child is developing in the womb, are different from birth injuries, which are caused by complications occurring during labor or delivery. Birth injuries are often avoidable and might even be brought about by malpractice on the part of physicians or health care facilities.

Childbirth injuries to newborn babies that stem from mechanical forces such as traction or compression during birth are characterized as birth trauma. Factors responsible for mechanical injury may coexist with hypoxic-ischemic insult; one may predispose the infant to the other. Significant birth injury accounts for fewer than 2% of neonatal deaths and stillbirths in the United States; it still occurs occasionally and unavoidably, with an average of 6-8 injuries per 1000 live births. In general, larger infants are more susceptible to birth trauma (5).

Birth Trauma: risk factors play a role that cannot be discounted

Scientific and technological progress in obstetrics and gynecology has made giant strides, modifying and improving diagnostic and preventive techniques, resuscitation and transplant procedures; advancements have created great expectations in patients, leading to a different conception of health, now construed as psycho-physical well-being instead of the mere absence of diseases. Critical issues still linger however, which have proven hard to overcome (6). A broad range of risk factors are linked to birth trauma, and may be related to the fetus, mother, pregnancy or iatrogenic elements.

Fetal and pregnancy-related main factors are macrosomia (generally characterized as a fetal weight over 4000g),

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macrocephaly, very low birth weight, severe prematurity, fetal congenital anomalies, oligohydramnios and malpresentations including breech presentation or other abnormal presentations (such as the face, brow, or transverse). In such cases, an episiotomy is often performed in order to expedite and facilitate fetal passage through the birth canal, although episiotomy itself often ushers in considerable maternal complications; in fact, virtually all scientific societies and health care institutions encourage a restrictive approach to episiotomy, strongly advising against its routine use, which may even lead to claims of "obstetric violence" in case of adverse outcomes conducive to the procedure itself (7), particularly when performed without the patient's informed consent (8). The same holds true for procedures such as fundal pressure, also known as Kristeller maneuver (KM), a procedure associated with a higher risk of levator ani muscle avulsion, particularly when used in patients during their first vaginal delivery (9, 10). KM has also proved to be conducive to a higher likelihood of perineal lacerations, as well as higher episiotomy rates and legal repercussions (11). Maternal risk factors may include maternal obesity and/or diabetes, cephalopelvic disproportion, small maternal stature, dystocia, primiparity, difficult extraction, use of vacuum or forceps, prolonged or rapid labor (12). Postpartum hemorrage, uterine rupture (especially in presence of scarred uteri and and infections. Uterine rupture undoubtedly constitutes a serious complication during pregnancy. It happens when the uterine wall is torn during pregnancy, and it occurs more commonly in patients who have previously undergone a cesarean section (CS), often coinciding with the CS scar (13, 14). Uterine rupture may cause infertility, making it necessary for patients to resort to assisted fertilization techniques if they wish to achieve motherhood (15-18); an alternative could be constituted by uterus transplantation (UTX), by which several pregnancies have already been successfully brought to term; UTX, however, is bound to engender legal, ethical and medico-legal implications (19, 20). Overall, when dealing with such complex scenarios, especially cases involving advanced age patients, the proper and thorough management of labor, delivery and puerperium is essential in order to stave off the possible risks of thromboembolic, cardiac and other complications (21-23). Cerebral palsy, Erb's palsy and brain damage are just a few examples of the types of major birth injuries that newborns may suffer while being delivered. These injuries may occur because of environmental factors, genetic predisposition or medical malpractice. Infants with birth injuries need widely variable clinical management and prognosis, usually depending on the type and severity of the injury. Birth trauma commonly manifests itself in the head, neck, and shoulders, or less commonly, the face, abdomen, and lower limbs (24).

Charges leveled at physicians and hospitals

Most allegations in obstetric lawsuits against obstetrician-gynecologists are somehow tied to the management of labor and delivery, while relatively few exclusively involve perceived flaws in prenatal care. A substantial number of claims stem from peripartum and post-partum infections, which have been observed in 8 out of every 1000 live births and 71 of every 1000 neonatal admissions. Of these infections, 82% occur in premature babies (less than 37 weeks) and 81% in low birthweight newborns (below 2500 grams) (25, 26). Although in such instances defendant doctors are often charged with having failed to properly monitor the fetus during labor for signs of oxygen deprivation, it is quite common in most cases to face the underlying allegation regarding the decision-making process about the timing and route of delivery (27). Innovative practices such as ultrasonographic monitoring can go a long way towards clarifying and documenting how decisions were made by physicians, which can in turn prove extremely valuable in a court of law, should malpractice claims be filed following adverse clinical developments (28, 29). In cases of pregnancies achieved through medically-assisted reproduction techniques, moreover, operators should be fully aware of the perinatal risks that have been linked to assisted reproductive technology (ART) and ovulation induction (30). In fact, complications such as multifetal gestations, prematurity, low birth weight, small for gestational age, perinatal mortality, cesarean delivery, placenta previa, abruptio placentae, preeclampsia, and birth defects have all been associated with ART pregnancies (31, 32). Although these risks appear to be substantially higher in multifetal gestations, even singletons conceived through ART and ovulation induction may be at higher risk than singletons from naturally occurring pregnancies. However, it remains unclear to what extent these associations might be related to the underlying cause(s) of infertility, which made ART necessary in the first place. Patients who plan to use assisted reproductive technologies should be counseled about such aspects and others,such as the ethical and moral implications of ART (33). Furthermore, patients are entitled to be provided with thorough information as to the benefits and risks linked to any procedure and to know in a timely fashion about any particular choice or conviction held by their physicians in terms of conscience based opposition to certain practices (e.g. refusal to perform abortions or to prescribe emergency contraception methods) (34, 35).

Malpractice allegations: on what basis?

Malpractice charges stemming from birth injuries and ensuing claims may be caused by a wide array of alleged medical errors during childbirth, which have been observed through an overview of court cases:

– Failing to recognize and address fetal distress
– Improper or negligent use of vacuum extractors or forceps
– Excessive force applied during procedures
– Not properly addressing a lack of oxygen
– Failure to implement proper follow-up after delivery
– Administration of hazardous drugs
– Inaccurate dosage of medication
– Failure to carry out a cesarean section when necessary (36).

Legal statutes, particularly under tort law, tend to place a heavy onus on physicians to prove that all relevant guidelines, best practices and directives were complied with. In

that respect, Italy has recently clarified through a recent reform (law n. 24/2017) (37) a targeted system of accreditation, oversight and upgrading of existing guidelines, which must be outlined by public and private medical bodies and institutions, supported by scientific and technical orders and associations listed in a specific registry (38).

Allegations of negligence following birth injuries, when vetted and acknowledged by a court of law, may lead to extremely substantial compensatory damages being awarded. Interestingly, however, the Italian joint criminal divisions of the Supreme Court of Cassazione, released on February 22, 2018, asserted that emergency medical conditions may constitute "special complexity issues" and, therefore, art. 2236 of the Italian Civil Code applied which codifies that health care professional may be punishable only in case of gross negligence or willful misconduct (39).

Table 1. Significant Examples of Lawsuits and Settlements arising from Birth Injuries

Patient/Location/ Date	Pregnancy Developments	Injuries Sustained	Legal Outcome
Mrs. A./ Salina Regional Health Center, Kansas, USA/ February 2006	A. presented to the Salina Regional Health Center at 39½ weeks gestation in active labor. From the moment a fetal heart monitor was placed on A. shortly after admission at 3:30 a.m., signs of umbilical cord compression accompanied every contraction. The on-call obstetrician, Dr. D. P., had not met A. until that day. During that visit, the membrane was ruptured, leading to a severe variable deceleration in the baby's heart rate. That sign went unnoticed or ignored by Dr. P. and the Salina Regional nurses, although it may signal umbilical cord occlusion. The fetal heart monitor strip for the previous 15 minutes was intermittent and unreliable. Dr. P. conceded that careful inspection of the fetal heart monitor strip for those crucial 15 minutes showed repetitive, variable decelerations. Had these been noticed and acted upon, a timely assessment and intervention would have occurred. Yet, no action was taken. When A. started pushing, on Dr. P.'s request, the fetal heart rate appeared clearly on the monitor at 60 beats per minute, i.e. incapable of pumping blood to vital organs, including the brain. Because Dr. P. had left the room, four minutes passed before personnel could find him and get back. He ordered an emergency c-section.	Four hours later, a baby girl was delivered by emergency CS, asphyxiated and permanently injured. The delay in recognizing the cord compression and the consequent deprivation of oxygen, caused hypoxic ischemic encephalopathy and cerebral palsy. The child will never walk, talk or find gainful employment. She will always require 24-hour skilled care.	Plaintiff's experts, and several defense experts, stated that had Kylee been delivered before pushing began, she would have suffered no injuries. At a second mediation, the Hospital agreed to settle the case for $3.7 million. Dr. P. offered to settle the case for his $1 million insurance coverage. Upon plaintiffs' counsel's insistence, he also paid an additional $20,000 in personal assets to help offset plaintiffs' litigation expenses incurred between the two mediations (40).
Undisclosed identity/ Chelsea and Westminster NHS Foundation Trust Hospital, London , England/26th January 2008	The mother noticed that her child struggled with breastfeeding, and she raised concerns about his floppy and jaundiced appearance. His condition worsened, and at 48 hours of age, he was transferred to neonatal unit in serious condition. He was found to suffering from severe hypoglycaemia, and he began developing seizures. Evidence of brain damage was found by an MRI scan on 29th January 2008.	The child has been diagnosed with asymmetrical quadriplegic cerebral palsy, developmental delay and impaired communication skills. He suffers from seizures, which along with his behavioral impairment need 24/7 care.	The lawsuit stemmed from the hospital's failure to properly manage the child's feeding and glucose levels in accordance with their own protocols, in compliance with best care standards for babies at risk of hypoglycaemia. Expert witnesses in midwifery and neonatology agreed that the post-natal care provided to the plaintiff was substandard. Moreover, evidence from experts in neuroradiology of paediatrics backed the allegations in full. The trust initially denied liability, although once court proceedings had been issued and the particulars of claim were served on the defendant, it admitted liability. We soon after managed to secure one of a series of interim payments of damages for our client, in order to fund his care team and various therapy needs. A further substantial interim payment of £1,500,000 was obtained for the purchase of a suitable property to be adapted to accommodate our client's many special needs. Following negotiations, a settlement of over £27 million was established, through periodical payments for the provision of adequate lifetime care needed (41)

(follows)

Mrs. W./ Tripler Army Medical Center, Honolulu, Hawaii (USA)/September 2010	Mrs. W. arrived at the hospital on Sept. 7, 2010 with severe lower abdominal pain at about 35 weeks of pregnancy. The pregnancy was closely monitored because of previous miscarriages and the complicated birth of her first child, Evan.	According to court documents from the federal court in Honolulu, the infant was born with a "catastrophic brain injury", suffers from cerebral palsy and developmental delays because of medical mistakes made by the staff at the medical center, who didn't appropriately respond to when she uterine rupture suffered by the mother. In turn, they failed to perform an emergency cesarean section due to a "failure to notify and consult the obstetrician who had been managing promptly."	The lawsuit centered on charges including the failure to respond appropriately and in a timely fashion to signs and symptoms of uterine rupture and taking too long to perform a cesarean section. The mother "was at risk for uterine rupture in connection with future pregnancies, including her pregnancy with N.," according to the lawsuit filed in July 2012. Moreover, the lawsuit alleged that there was a "failure to promptly notify and consult the obstetrician who had been managing" the pregnancy, blaming the hospital for the baby's severe brain injury and said he "will require 24 hour per day care for the remainder of his life." A spokeswoman for the clinic declined to comment. The assistant U.S. Attorney representing the government didn't respond to requests for comment. Attorney for the family stated that a $9 million settlement was reached; $5 million will be paid as a lump-sum and the remaining $4 million will be paid over time for the remainder of the child's life (42).
Mrs. V.U./ Pottstown Memorial Medical Center, Pennsylvania (USA)/May 2012	V.U., 36 weeks pregnant, arrived at the hospital in considerable pain and bleeding because of a detached placenta, which can even deprive the baby of oxygen . Instead of promptly delivering the infant by cesarean section, the doctor chose to examine Ms. U. with an outmoded and improperly maintained ultrasound device. The baby was later declared dead. The hospital then called in an ultrasound technician, who arrived at the facility 80 minutes after the frantic mother had asked for a cesarean delivery. The technician found that the baby was still alive, prompting an emergency cesarean.	The infant was finally delivered alive but she suffered quadriplegic cerebral palsy and permanent disability arising from the lack of oxygen directly caused by the delayed delivery.	The attorney for the plaintiffs filed a lawsuit against the hospital and doctors, arguing that negligence and malpractice had determined the catastrophic outcome. The jury found the hospital to be 100 percent at fault, and assigned no blame to the obstetricians, Dr. C. T. and Dr. R.S.; both professional had been charged with having inappropriately monitored the baby during transport to a neonatal care unit. The attorney for the health care facility unsuccessfully attempted to make the case that even though the bedside ultrasound equipment was not sensitive enough to detect the baby's heartbeat, it was still functional enough to satisfy the hospital's standard of care. The verdict totaled $78.5 million. The jury in fact awarded $65 million for the baby's future medical costs, $10 million for the pain and suffering she had to endure, and $2 million in lost future earnings. The jury also awarded $1.5 million to V.U., the baby's mother, for the emotional distress she had experienced upon learning that her baby was dead (43).
Mrs. E.G.W./ York Teaching Hospital NHS Foundation Trust/11th May 2015.	Within minutes of her birth, the baby's (the Claimant's) condition deteriorated and she showed signs of respiratory distress syndrome. However, no medical staff was available at the hospital and it took 30 minutes for a doctor to finally arrive after being summoned; during that time frame the child's conditions got significantly worse.	The Claimant developed a mixed dystonic and spastic cerebral palsy with substantial dyskinesia, resulting in irregular, jerky motions. Her functional, physical, cognitive and communication impairments are irreversible and severe. Her life expectancy reduced, and she will need 24 hour care; in addition, she will never be able to work, and will remain wheelchair dependent. Therapeutic treatments will be needed for the rest of her life. Still, she has retained some of her intellectual abilities. She functions within the borderline to low average range of ability. She can operate an iPad and a touch switch with her left hand. She is a popular and personable young woman who has a number of friends at school.	The case was settled for a lump sum payment of £4,300,000 plus a periodical payment of £102,500 per annum from now until the Claimant is 19 and then £210,000 per annum thereafter for the rest of her life. With a capitalised equivalent (at 2.5% discount rate) of £9.5 million this reaches some £10 million, thus enabling the Claimant to live in a house befitting her needs and suitable therapeutic options, including a hydrotherapy pool at home. Periodical payments will provide long term financial peace of mind for the Claimant's representatives and will last for the rest of her lifetime. (44)

(follows)

Mrs. L.B./Pecos Valley Clinic, New Mexico, USA/August 2018	L.B., a 36 years old with diabetes turned to Dr. J.M. and the Pecos Valley Clinic for good medical care. Older diabetic mothers are known to have very large babies, and very large babies run a high risk of injury during vaginal delivery. Ms. B. was not adequately monitored during pregnancy and was not counseled on the opportunity to deliver via cesarean section.	The University of New Mexico Health Sciences Center advised the doctor to have the mother undergo more testing, yet the physician decided not to take that advice. Nevertheless, the baby turned out to be large, weighing about 11.5 pounds, and was stuck for more than ten minutes in the birth canal. During that time, he suffered severe oxygen deprivation until Dr. M. started an instrumental delivery, applying a vacuum extractor to forcibly pull the infant out of the mother's body. Permanent brain and nerve damage was brought about by the botched delivery.	Attorneys for the plaintiffs made the case that Dr. M. and the hospital had acted negligently and failed to follow the appropriate standards of medical care during the patient's pregnancy and delivery. In August 2018, the court awarded $19.8 million in compensatory damages to the injured child, plus $13.3 million to his mother. $40 million also granted by the jurors in punitive damages, which are intended to punish the at-fault parties for particularly egregiously negligent behavior (45).

Conclusions: stick to guidelines while making compliance thoroughly documented and provable

Birth injuries caused by medical negligence are a persistent problem for mothers and their children, in that they can result in life-changing consequences, permanent disability, significant medical expenses and other future costs. In order for a birth injury malpractice claim to be successful, the plaintiff are required to prove that the medical care providers owed a duty to the child and that they failed to fulfill that duty by breaching the accepted standard of care (46); moreover, there has to be a provable causal relationship between injury sustained by the child and the physician's or provider's breach of duty to the child. The injury needs to be measurable in damages, by standards that the court can use to determine the scope of redress owed to the plaintiff (47). Provable and adequately documented compliance with well-established guidelines and/or best practices can be a determining factor in the legal defence of health care operators; that in turn can deter undue compensation claims and frivolous lawsuits, which constitute a challenging issue in many countries.

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