

Citation

Chadwick, HS: Obstetric Anesthesia Closed Claims Update II. *ASA Newsletter* 63(6):12-15, 1999.

Full Text

Much has been learned about anesthesia liability risk since 1984 when the Committee on Professional Liability began its ongoing study of insurance company documents involving anesthesia-related cases. Among the areas that have been reviewed in-depth are cases involving care for obstetric patients. An analysis of obstetric data was first published in 1991 and subsequently updated in the *ASA NEWSLETTER* in 1993 when the Closed Claims database numbered 2,400 records (294 obstetric-anesthesia related). The last comprehensive analysis of obstetric related cases was published in 1996 when the database contained 3,533 files (434 obstetric-anesthesia related). That analysis is the source of much of the information presented here.

Obstetric Versus Nonobstetric Claims

Of the 3,533 claims, 12 percent (434) involved anesthesia for cesarean section (71 percent) or vaginal delivery (29 percent). The mean maternal age was 28 years for patients with obstetric claims versus 42 years for patients with non-obstetric claims.

Sixty-seven percent (290) of obstetric claims were associated with regional anesthesia and 31 percent (133) with general anesthesia. In contrast, only 17 percent of the non-obstetric claims were associated with regional anesthesia and 76 percent with general anesthesia. However, the distribution of regional and general anesthesia for claims involving cesarean section appears similar to the frequency with which these types of anesthetics are used for cesarean delivery in this country.

Anesthesia-Related Injuries

Table 1 lists all injuries or complications with a frequency of 5 percent or greater in the obstetric files as well as the type of anesthetic and mode of delivery. Maternal death (n=83) and newborn brain damage (n=82) continue to be the most common injuries. Maternal death was more commonly associated with general anesthesia and cesarean delivery.

Table 1

Most Common Injuries In the Obstetric Anesthesia Files

All tables based on those from: *International Journal of Obstetric Anesthesia*, volume 5, issue 4, HS Chadwick, An analysis of obstetric anesthesia cases from the American Society of Anesthesiologists closed claims project database, pages 258-263, 1996. Please see the [Newsletter article](#) on the ASA Web Site for table data.

Newborn brain damage accounts for 19 percent of obstetric anesthesia related claims. Because the etiology of newborn brain damage is difficult to determine, it is usually not clear to what extent anesthesia care was causally involved. The anesthesiologist reviewers felt that only 46 percent of newborn brain injury claims and 26 percent of newborn death

claims were related to anesthetic care. This is a much lower proportion than was seen in other injuries. It does appear that anesthesiologists are more likely to be unfairly named in a claim for newborn brain injury. Reassuringly, the payment rate is lower for both newborn brain damage (44 percent) and death (41 percent) than for other obstetric claims (52 percent).

In order to better compare the obstetric files with those of the nonobstetric population, Table 2 lists the most common injuries in the obstetric claims after removing those involving injury to the newborn only. Maternal death continues to be the leading reason for a claim file being opened, although it constitutes a smaller proportion of total claims than in the non-obstetric population. The main reason appears to be the large proportion of relatively minor injuries among the maternal injury claims.

Table 2

Maternal Injuries Compared to Similar Injuries in the Nonobstetric Files

All tables based on those from: International Journal of Obstetric Anesthesia, volume 5, issue 4, HS Chadwick, An analysis of obstetric anesthesia cases from the American Society of Anesthesiologists closed claims project database, pages 258-263, 1996. Please see the [Newsletter article](#) on the ASA Web Site for table data.

Claims for headache, pain during anesthesia, back pain and emotional distress total 47 percent of maternal claims compared to only 8 percent of non-obstetric claims. There appear to be a number of reasons for this disparity. In contrast to claims for maternal death, these minor injuries (with the exception of emotional distress) are more commonly associated with regional anesthesia. The popularity of regional anesthesia techniques in obstetrics combined with the greater incidence of post-lumbar puncture headaches in young females likely account for the greater number of headache claims in this population. Similarly, claims for back pain may be more likely in a population with a high rate of regional anesthesia and because of the high rate of back pain associated with pregnancy itself.

Almost all claims for pain during anesthesia are associated with cesarean delivery. Apparently, inadequate analgesia for labor and vaginal delivery is seldom a source of liability risk, but pain during cesarean section is a cause for concern. Claims for pain during cesarean delivery almost always are made in the setting of regional anesthesia. Some of these claims may result from a reluctance on the part of anesthesia personnel to convert to general anesthesia during cesarean delivery, fearing the increased risk of airway difficulties and/or pulmonary aspiration.

Events Leading to Injuries

The closed claims data not only identifies the injuries that were associated with a file being opened but also reveals information about the events that lead to the injury. The most commonly identified mechanism of injury or damaging event for both obstetric and nonobstetric files are listed in Table 3. Critical respiratory events are most common for both groups. Of the respiratory events, there is a trend for more problems with difficult

intubation and pulmonary aspiration in obstetric files as compared to nonobstetric claims.

Table 3

Most Common Damaging Events In the Obstetric Anesthesia Files

All tables based on those from: International Journal of Obstetric Anesthesia, volume 5, issue 4, HS Chadwick, An analysis of obstetric anesthesia cases from the American Society of Anesthesiologists closed claims project database, pages 258-263, 1996. Please see the [Newsletter article](#) on the ASA Web Site for table data.

The greater proportion of obstetric claims in which pulmonary aspiration was identified as the primary damaging event is particularly noteworthy because almost all of these events (15 of 17) occurred in association with general anesthesia which accounted for only 31 percent of obstetric files but 76 percent of the nonobstetric files. Pulmonary aspiration was noted in 7 percent (29) of the obstetric files, but was not always considered the *primary* damaging event. In 25 of these cases, the primary anesthetic technique was general anesthesia. In 10 cases, aspiration occurred during difficult intubation or following esophageal intubation, and in seven cases, mask general anesthesia was being used. In three cases, vomiting and aspiration occurred at the time of induction without cricoid pressure. Two cases of aspiration associated with regional anesthesia occurred during resuscitation and intubation efforts following high spinal blocks. In two other cases, heavy sedation was implicated.

Obesity has long been considered a risk factor for anesthetic complications, particularly with regard to airway management. The obstetric closed claims files indicate that damaging events related to the respiratory system were significantly more common among obese (32 percent) than non-obese (7 percent) parturients ($P \leq 0.01$). These data serve to underscore the need to be cautious and to have emergency algorithms and equipment readily available when caring for these women.

While respiratory events, as a group, constitute the largest proportion of damaging events, the single most common damaging event in the obstetric closed claims files was convulsion (Table 3). Twenty-two of these cases appear to be related to local anesthetic toxicity associated with epidural anesthesia. Fortunately, since about 1984, the number of claims involving convulsions has decreased substantially. The current trend of using effective test doses, fractionating local anesthetic injections and not using bupivacaine 0.75 percent has likely contributed to a reduction in the risks from this mechanism of injury.

Nerve damage was the third most common maternal injury claim (Table 2). To better understand the etiologies of these injuries, a panel of anesthesiologists reviewed the closed claims files of each maternal nerve injury case involving epidural or spinal anesthesia.

The panel judged 55 percent (21/38) of the injuries to be a likely consequence of anesthetic procedures or care. The nerve injury in the majority of these cases appeared to be a result of direct trauma to neural tissue. Severe pain or paresthesia during needle or catheter placement or during local anesthetic injection was a prominent feature in these claims. Other mechanisms of injury, such as apparent neurotoxicity and ischemic causes (epidural abscess, hypotension or vascular insufficiency) were less common. In fact, no cases of

epidural hematoma were identified in the maternal injury claims.

Lessons Learned

The most recent analysis of the obstetric anesthesia-related liability files reveals similar results to those of our earlier reports. Liability risk in obstetric anesthesia differs considerably from that in nonobstetric practice. Complications involving the respiratory system account for the largest proportion of damaging events in both groups and problems with difficult intubation and pulmonary aspiration are disproportionately represented in the obstetric files. These findings corroborate most anesthesiologists' belief that the pregnant patient's airway demands additional attention and care. As for regional anesthesia-related claims, local anesthetic toxicity remains a concern, although the number of such claims appear to be declining. Nerve damage also constitutes a relatively large percentage of claims, although, as with newborn brain injury cases, the relation to anesthesia care is often in doubt.

The most surprising difference between obstetric and nonobstetric claims is the large proportion of claims for relatively minor injuries in the obstetric files. While reducing major adverse anesthetic outcomes in obstetrics is important, attention must be paid to limiting liability risk associated with less severe outcomes like headache, pain during anesthesia and emotional distress. To some extent, the large proportion of relatively minor injuries in the obstetric files may be due to a greater incidence of such problems in these patients. However, detailed review of these files suggests that in many cases, patients were unhappy with the care provided and felt mistreated. Clearly, factors other than major injury are important in motivating a patient to bring a claim.

Therefore, anesthesiologists should attempt to conduct themselves in a manner such that patients will not be motivated to bring a suit for an unexpected outcome. Measures should include establishing and maintaining good patient rapport. Anesthesiologists should become involved in the prenatal education process. A careful preanesthetic evaluation is very important and should occur as early in labor as possible. Special care should be taken to provide patients with realistic expectations of common minor and potential major risks associated with anesthetic procedures. This discussion should be clearly documented in the medical record.

References

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