

Tsai YK, Sharar SR, Posner KL, Domino KB, Cooper PM, Cheney FW: Does Anesthetic Care For Trauma Present Increased Risk For Patient Injury And Professional Liability?: A Closed Claims Analysis. *University of Washington Dept. of Anesthesiology, Seattle, WA.*  
*Unpublished abstract presented at the 14th Annual Trauma Anesthesia and Critical Care Symposium in San Diego, CA, USA, May 2001.*

## **Full Text**

### **Purpose**

Trauma patients are theoretically predisposed to increased anesthetic risks, including hemorrhage-induced hypotension, aspiration of gastric contents, and difficult or emergent endotracheal intubation. As a consequence, anesthesia for trauma care may carry a higher malpractice liability risk when compared to non-trauma care. We conducted an analysis of cases from the American Society of Anesthesiologists Closed Claims Project to evaluate the potential contribution of trauma to professional liability for anesthesia care.

### **Methods**

The ASA Closed Claims Project database is a collection of standardized case summaries of closed malpractice claims from 35 U.S. insurance organizations insuring approximately 14,500 anesthesiologists. All claims for trauma-related anesthetic care (defined as care provided within 3 days of injury for blunt or penetrating trauma, burns, drowning, or environmental injury) were reviewed to identify patterns of causation, injury, standard-of-care, and liability, and then compared to non-trauma claims. Cases occurring prior to adoption of ASA Standards for Basic Monitoring (October 1986) were excluded.

### **Results**

Trauma patients accounted for 87 (4.8%) of 1814 claims in the database. The majority of trauma claims involved men (64% vs 39% for non-trauma,  $p < 0.01$ ), ASA physical status class III-V (51% vs 34% for non-trauma,  $p < 0.01$ ), and emergencies (72% vs 18% for non-trauma,  $p < 0.01$ ). As shown below, there was a higher incidence of death and a trend toward a higher incidence of brain damage in the trauma group, despite similar appropriateness of standard-of-care in the two groups. The frequency of payment for trauma and non-trauma claims was similar, although the median payment for trauma claims was higher. Aspiration, awareness, and difficult intubation occurred with similar or less frequency in the trauma group, compared to the non-trauma group.

Outcome	Trauma Group	Non-Trauma Group	p value
Death	40.3%	23.4%	<0.01
Brain Damage	16.1%	10.0%	NS
Standard-of-Care Met	50.6%	54.3%	NS
Payment Made	44.8%	47.1%	NS
Median Payment	\$225,000	\$95,000	<0.05
Aspiration	2.6%	4.3%	NS
Awareness	0%	2.4%	NS
Difficult Intubation	10.3%	9.0%	NS

## Conclusions

Closed claims data must be interpreted carefully due to inherent limitations in the database: (1) numerical estimates of risk cannot be determined due to absence of denominator data (i.e., total number of anesthetics provided); (2) not all injuries result in claims; (3) data collection is retrospective and non-random. Nonetheless, the database does provide a meaningful sketch of anesthesia liability. Our data suggest that, compared to non-trauma claims, trauma anesthetic claims involve more emergent patients, more critically ill patients, and results in more severe outcomes. The frequency of claim payments does not differ between trauma and non-trauma cases; however, median claim payment is higher for trauma claims. In contrast to conventional wisdom, there is no increased proportion of claims for aspiration, awareness, or difficult intubation as a result of anesthetic trauma care, suggesting that current trauma anesthetic practice is appropriate. The organization and implementation of trauma systems should include attention to these findings, with regard to education, training, and administration of trauma anesthesia services.