Assessment of malpractice claims associated with rotator cuff surgery

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Abstract
Rotator cuff surgery is a commonly performed and may lead to malpractice litigation. Despite this, there is a paucity of data evaluating outcomes of malpractice litigation following rotator cuff surgery.

A retrospective investigation of the VerdictSearch legal claims database following rotator cuff surgery was performed. Plaintiff demographics, reason for litigation, and the effect of surgical complications were assessed as were the proportion of plaintiff rulings and size of payments.

In total, 40 cases were analyzed. Mean age of plaintiffs was 52±11.2 years; 30 (75%) plaintiffs were male. Twenty-six cases (65% of suits) named pain and weakness as a complication of the procedure. In total, 60% (24) resulted in a defendant ruling, 25% (10) in a plaintiff ruling, and 15% (6) in a settlement. Total liabilities of the 40 cases were $15,365,321 with individual awards ranging from $75,000 to $5,000,000. Mean plaintiff award was $694,032±$586,835 (range: $75,000 to $5,000,000).

Materials and Methods

Data collection
This study utilized a keyword query of the VerdictSearch (ALM Media Properties, LLC, New York, NY) database for cases between February 1988 to May 2015 (27 years). Of the 180,000 claims indexed in VerdictSearch, 22,074 represent cases of medical malpractice. This database has been previously used and validated in studies of compartment syndrome, primary hip arthroplasty, and spinal surgery.2-10 This database was queried using the terms rotator cuff, shoulder arthroscopy, and shoulder instability. Only cases whose primary procedure was a rotator cuff repair were included. Patients of all ages were included. Cases were excluded if there was missing or incomplete information. Demographic data collected for each patient included age, occupation, sex, and state in which the lawsuit was filed. Preoperative diagnosis, surgical complications, surgical procedure performed, and the medical specialty of the defendant were also recorded. Litigation outcomes where classified as defendant verdict (medical provider victor), plaintiff verdict (medical provider loss), or settlement. In both settlements and plaintiff verdicts, the amount awarded (indemnity payment) was recorded.

Statistical analysis
For all cases, the proportion of cases reaching settlement and ending in physician loss was calculated along with the corresponding 95% confidence interval. The effects of the age of the plaintiff, sex of the plaintiff, surgical complications, operative site, specialty of the surgeon, hospital defendant named in the suit, delay in diagnosis, and delay in treatment were evaluated using chi-square testing (Microsoft Excel). Effect on the amount of indemnity payment was evaluated for all variables using Student’s t-tests and 1-way ANOVAs. Statistical significance was set at P<0.05.

Results

Case characteristics
Fifty-eight cases were examined; 18 cases were excluded due to irrelevance (e.g. primary indication was not a rotator cuff tear), and 40 cases were analyzed in detail.
(Table 1). The mean age of the plaintiff was 52±11.2 years (mean±SD; age was not available in 2 cases). The cases had 10 female plaintiffs (25%) and 30 male plaintiffs (75%). Lawsuits occurred across the country, but most commonly in California and New York, with 11 (27.5%) and 6 (15%) respectively (Table 1).

### Litigation outcomes

Overall, 60% of cases (24 cases) resulted in a defendant ruling, 25% (10) in a plaintiff ruling, and 15% (6) in a settlement (Table 2). Total liabilities of the 40 cases were $15,365,321 with awards ranging from $75,000 to $5,000,000. The average amount award to plaintiffs was $694,032 ± $586,992. Average indemnity payment was $679,909 ± $586,992. Limited range of motion (ROM) was listed in 57.5% of cases (23). Physician loss rate was 30.8% when pain and weakness were named as chief complaint, and 11.5% led to settlements. Average indemnity payment was $679,909 ± $586,992. Limited range of motion (ROM) was listed in 57.5% of cases (23). Of these cases, 13% of cases led to settlements and 26% of cases resulted in physician losses. Average indemnity payment was $711,556 ± $651,193.

Fifteen percent (6 cases) of cases involved surgical site infections, leading to one settlement and one plaintiff victory. Average indemnity payment following a successful suit after a surgical site infection was $768,091 ± $257,259. Nerve damage and death were each listed in 10%. Twenty-six patients (65%) had multiple complications listed (Table 1).

### Surgical complications

Orthopedic surgeons were the most common defendants (26 cases, 65%), followed by nonsurgical providers (14 cases, 35%). Sixty-five percent of lawsuits (26 cases) named pain and weakness as one of the complications of the procedure (Table 3). Average indemnity payment was $679,909 ± $586,992. Limited range of motion (ROM) was listed in 57.5% of cases (23). Of these cases, 13% of cases led to settlements and 26% of cases resulted in physician losses. Average indemnity payment was $711,556 ± $651,193.

Fifteen percent (6 cases) of cases involved surgical site infections, leading to one settlement and one plaintiff victory. Average indemnity payment following a successful suit after a surgical site infection was $768,091 ± $257,259. Nerve damage and death were each listed in 10%. Twenty-six patients (65%) had multiple complications listed (Table 1).
gery should be discussed. Thorough documentation of this process in combination with a focus on patient education, rehabilitation, and expectation management may be helpful for preventing lawsuits or successful litigations.

As with any retrospective database analysis there are potential limitations. VerdictSearch is not a comprehensive malpractice database and therefore cannot assess the prevalence of all shoulder surgery litigation. The cases are submitted by the case attorneys to be reviewed by database editorial staff, but without the review of a medical doctor. Therefore, the level of medical detail for each case is variable based on court reports. Nevertheless, VerdictSearch has been used in numerous previous studies and is a useful tool to analyze the impact of malpractice in orthopedic surgery.7-10 As this is the first study looking at outcomes of litigation following shoulder surgery, it provides an initial look at the current medicolegal landscape. However, further additional research is needed to better understand the scope of the problem. Studies examining larger numbers of cases could elucidate significant trends. Though these data stemmed from a large database, it may not accurately represent litigation following all shoulder surgery nationwide, as many cases are settled or dropped before even coming before a judge.

Although many factors related to medical malpractice are complex, uncontrollable, and warrant further investigation, efforts to optimize effective patient communication are likely beneficial. Increased transparency and a more in-depth consent process may help empower the patient and enhance the surgeon-patient relationship. The consent process should include the possibility of continued shoulder pain, loss of motion, and weakness even after rotator cuff surgery. Management of patients’ expectations through effective communication may help reduce the risk of litigation following rotator cuff surgery.

References