Litigation Following Carpal Tunnel Release

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Abstract

Background: Carpal tunnel release (CTR) is the most common hand surgery operation performed in the United States. While serious complications are rare, they can be life-altering to patients. In some cases, patients will pursue malpractice claims against the surgeon. This study aimed to understand the patient, procedure, and surgeon factors involved in CTR malpractice litigation. **Methods:** The Westlaw legal database was queried for all recorded CTR malpractice cases resulting in jury verdicts and settlements. Only cases directly related to injury after CTR were included in this study. Cases were reviewed to determine plaintiff demographics, defendant training, liability, injury, outcomes, and monetary awards. **Results:** Ninety-two unique cases were identified. Plaintiffs were predominantly female ($n = 65$, 71%). Most surgeons were orthopedic-trained ($n = 37$, 52%). Only 27% of defendants ($n = 19$) were hand fellowship-trained. Only 19% of cases resulting in a monetary award were against surgeons who had hand fellowship training. The majority of cases ($n = 61$, 66%) were found in favor of the defendant. Monetary awards averaged \$305 923 (range = \$12 000–1 338 147), while settlements averaged \$266 250. Alleged liability was most for surgeon negligence ($n = 69$, 75%) with a third of cases resulting in monetary awards. Median nerve injury was claimed in 41 cases (45%), with 17 (41%) resulting in monetary awards. **Conclusion:** Although CTR is generally safe and effective, some patients will experience complications. Median nerve injury was the most common reason for successful litigation in this study. Adequate training and experience in hand surgery may lower the risk of injuries resulting in successful malpractice suits.

Keywords: carpal tunnel release surgery, litigation, fellowship training, liability

Introduction

Carpal tunnel release (CTR) is the most common hand surgery procedure in the United States.⁸ More than 500 000 releases are performed annually, with estimated economic costs in excess of \$2 billion.^{14,27} Patients generally report high satisfaction with CTR, and prospective studies have shown favorable outcomes.^{20,22} Although complications are uncommon, these untoward outcomes can range from mild to life-altering.^{4,17,19,26}

Surgical complications may arise from various circumstances including surgeon errors, patient factors, and system-based lapses. In some cases, patients will pursue malpractice litigation as a result of an unfavorable outcome.⁷ To successfully litigate, a plaintiff must demonstrate that the defendant surgeon had a duty of care to the patient, that there was a breach in adhering to the standard of care, and that the breach resulted in measurable damages.^{3,31}

Although studies have examined factors related to successful malpractice litigation in other specialties, this has not been well-studied in hand surgery.^{2,5,10,16,21,24,25,29,32–37} In this study, we sought to better understand patient, procedure, and surgeon factors involved in CTR malpractice cases.

Methods

We queried the Westlaw legal database for all recorded CTR malpractice cases resulting in jury verdicts and settlements using the keywords “medical,” “malpractice,” “carpal,” and “tunnel.” Only cases directly related to injury after CTR were included in this study.

Westlaw (Thompson Reuters, Eagan, Minnesota) is a comprehensive legal database that is available through subscription and contains legal recordings for reported cases including briefs, jury verdicts, settlements, proposed and enacted legislations, regulations, arbitration materials, and

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Table 1. Demographic and Characteristics of Defendants for CTR Lawsuits.

Defendant demographics (number of cases)	%
Sex	
Male	73
Residency training	
Orthopedic surgery only	52
Plastic surgery only	10
Hand fellowship (after orthopedic or plastic surgery)	27
Other (general surgery only, neurosurgery only)	11

Note. CTR = carpal tunnel release.

other legal proceedings.³⁸ The database is not all inclusive and as such only includes legal information for reported malpractice cases. The database contains jury verdicts and settlements written and processed by legal editors that contain decisions from all 50 states and the District of Columbia.^{11,39} Malpractice suits that are settled or dropped before going to court are not included; however, all cases placed on a court docket that are ultimately recorded on the database are available for review.^{12,13} We sampled the entire database for malpractice claims with jury verdicts and settlements related directly to injuries from CTR surgery, which were reported in this database.

Following the query, all jury verdicts and settlement reports were reviewed by the authors to determine liability, plaintiff demographics, defendant training, alleged injury and cause, case outcomes, awards, and settlements. Because Westlaw does not consistently report training background information of defendant surgeons, we searched for all named defendant surgeons to identify their training backgrounds.

Data were stored and descriptive statistics were performed in a database using Microsoft Excel (Microsoft Corp, Redmond, Washington).

Results

The search identified 92 unique cases that met inclusion criteria after removing duplicates. Plaintiffs were predominantly female ($n = 65$, 71%) with a mean age of 44 years. Defendants were predominantly male surgeons ($n = 67$, 73%) and most were trained in orthopedic surgery (52%) (Table 1). Only 27% of the defendants were fellowship-trained in hand surgery with the majority having completed an orthopedic surgery residency (79%) and the remainder a plastic surgery residency. Of the cases resulting in monetary awards and settlements to the plaintiff, only 19% were against surgeons who had hand fellowship training.

The majority of all cases ($n = 61$, 66%) were found in favor of the surgeon (Figure 1). Monetary awards were granted in 25 cases (27%), averaging \$305 923 (range = \$12 000–1 338 147). Settlements resulted in a lower average

monetary compensation of \$266 250 (Table 2). Alleged liability was most commonly for surgeon negligence ($n = 69$, 75%), but only 23 (33%) of those cases resulted in monetary compensation (Online Appendix I). Of the alleged injuries, the most common was median nerve injury ($n = 41$, 45%) with almost half of those claims ($n = 17$, 41%) resulting in monetary awards to the plaintiff (Online Appendix II).

Discussion

Surgical release remains the gold standard for the treatment of carpal tunnel syndrome.⁸ Level I evidence supports the effectiveness of open CTR, with a success over 90% at 18 months postoperatively.⁹ While complications from CTR are rare, they can be devastating. In a study of 54 publications including over 10 000 surgical releases, the rate of irreversible nerve damage ranged from 0.2% to 0.3%.⁶ Unfortunately, no published evidence exists regarding the injuries more commonly resulting in litigation.

If patients decide to pursue litigation for malpractice, they must demonstrate 4 basic elements of tort law: duty to care, breach in standard of care, injury caused by this breach, and resulting damages. In the case of CTR, duty is easily established by a surgeon performing the procedure. However, we found that the majority of plaintiffs were not able to demonstrate breach and approximately two-thirds of cases were found in favor of the surgeon. In successful plaintiff litigation, damages caused by median nerve injury were the most common finding.

In our study, factors that influenced a decision in favor of plaintiffs involved demonstrable surgeon negligence and significant injury to the plaintiff due to nerve injury. These results are similar to that found in a 2017 study looking at paid malpractice claims among US physicians over a 10-year period across a variety of specialties.³⁰ That study found claims related to significant injuries accounted for 39% of paid claims, compared with 14% related to minor physical or emotional damage. Several studies have found that plastic surgery, neurosurgery, and orthopedic surgery are among the specialties with the highest proportion of large paid claims.^{15,30} With high levels of litigation among specialties performing CTR, it is important that practicing surgeons are aware of their skills and experiences when choosing cases to perform and on which patients. Adequate informed consent is an important component of perioperative risk management. While lack of consent was the primary liability for only 1 plaintiff verdict case, this should not undermine its importance. It is possible that other alleged liabilities such as surgeon negligence result in higher monetary awards, thereby reflecting fewer cases associated with a lack of informed consent liability. In addition to informed consent, factors such as adequate surgical training and experience seem to be just as important in avoiding a malpractice claim.

Figure 1. Outcomes of CTR law suits (n = 92).

Note. CTR = carpal tunnel release.

Table 2. Monetary Award Distribution and Settlements.

Monetary awards	Average	Range
Jury award or plaintiff verdict	\$305 923	\$12 000-1 338 147
Settlements ^a	\$266 250	\$25 000-500 000

^aOne settlement was for an undisclosed amount.

A recent study from the Netherlands found that of 185 accepted claims related to hand and wrist malpractice, 147 were attributed to general surgeons, 26 to orthopedic surgeons, 9 to plastic surgeons, 2 to neurosurgeons, and 1 to a neurologist.²³ The authors advocated for hand surgeons treating hand conditions and for better training and supervision. Another study of 160 hand related claims using the UK National Health Service Litigation Authority (NHSLA) found CTR to represent more than a fifth of all claims.¹⁸ The authors found that more than half (56%) of litigation claims were related to surgical errors and emphasized the importance of more training for surgeons. In this study, we reviewed 92 cases of CTR and found that only 34% of all cases resulted in monetary compensation to the plaintiff, and only 19% of surgeons implicated in cases resulting in a monetary award were hand fellowship-trained (Table 1). While specific data on the number of CTR surgeries performed by surgeons of different training backgrounds are not readily available, these findings suggest the importance of adequate surgeon training and experience in performing CTR.

In a 2016 study looking at 60 successful carpal tunnel surgery claims over a 10-year period in the United Kingdom, the total costs to the NHS was £3.9 million (approximately \$4.9 million) while the mean cost of settling a claim was significantly less (£65 440).¹ Nerve damage was the most common cause for claims in that study. We had similar findings in our study, though monetary awards were significantly higher (Table 2). While some malpractice claims eventually get dismissed or do not reach trial, given the financial burden of successful claims, it is important as a defendant to be prepared, have reliable documentation, and well respected expert witnesses, preferably a hand surgeon.²⁸

This study has some limitations. Most notably, the Westlaw legal database does not account for all malpractice claims following CTR, only those reported in the database. As such, this study does not include all CTR malpractice claims. Furthermore, Westlaw reporting does not adhere to a fixed template, and not all cases contain the same quality and quantity of information. However, the large sample size of recorded cases allowed insight into trends and factors influencing litigation in CTR surgery.

Median nerve injury is a known complication of CTR, and it was the most common reason for successful litigation against surgeons in this series. Litigation following CTR resulted in significant monetary awards when found in favor of the defendants. Most defendants in this cohort did not have hand surgery fellowship training. This demonstrates the importance of appropriate training and

experiences, along with other risk mitigation strategies like good physician-patient relationships, informed consent, and honest and transparent interactions.²⁸

Ethical Approval

This study was approved by our institutional review board.

Statement of Human and Animal Rights

This article does not contain any studies with human or animal subjects.

Statement of Informed Consent

This article does not use any identifying patient information.

Declaration of Conflicting Interests

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