MALPRACTICE IN OTOLOGY

· Danielle M. Blake, BA[1] · Peter F. Svider, MD[1,2] · Eric T. Carniol, MD, MBA[1] · Andrew C. Maura, BA[3] · Jean Anderson Eloy, MD, FACS[1,4,5] · Robert W. Jyung, MD[1]

[1] Department of Otolaryngology—Head and Neck Surgery, Rutgers New Jersey Medical School (NJMS), Newark, NJ · [2] Department of Otolaryngology—Head and Neck Surgery, Wayne State University School of Medicine, Detroit, MI · [3] University of Michigan Law School, Ann Arbor, MI · [4] Center for Skull Base and Pituitary Surgery, Neurological Institute of New Jersey, Rutgers NJMS, Newark, NJ · [5] Department of Neurological Surgery, Rutgers NJMS, Newark, NJ

ABSTRACT

Objective: 1) Analyze otologic procedural malpractice litigation in the United States of America. 2) Discuss ways to prevent future malpractice litigation.

Study Design and Setting: Retrospective analysis.

Methods: The study is a retrospective review of court records pertaining to otologic procedures using the Westlaw legal database. The term "medical malpractice" was searched in combination with terms related to otology and neurotology obtained from the American Academy of Otolaryngology – Head and Neck Surgery website.

Results: Of the 47 claims that met inclusion criteria, 63.8% were decided in the physician's favor, 25.5% were decided in the plaintiff's favor (average payment $446,697), and 10.6% were settled out of court (average payment $372,607). Cerumen removal was the most common procedure leading to complaint (21.3%) and the most likely procedure to lead to payment (50.0%). Hearing loss was the most common injury claimed among all cases,(53.2%), and resulted in a high proportion of cases that lead to payment (40.0%). Other common alleged injuries were facial nerve injury (27.7%), tympanic membrane perforation (23.4%), need for additional surgery (42.6%), and lack of informed consent (31.9%). In addition, cases resulting from acoustic neuroma or stapedectomy resulted in higher payments to the plaintiffs (average $3,498,597 and $2,733,000 respectively).

Conclusions: Malpractice trials were resolved in the defendant's favor in the majority of cases. Cerumen removal was the most common procedure leading to complaint and the procedure most likely to result in payment. Hearing loss was the most common injury cited. Payment was highest in acoustic neuroma and stapedectomy case.

INTRODUCTION

The practice of otology is challenging, based on the complexity of the anatomy and physiology of the auditory and vestibular systems. The margin of error in the surgical practice of otology/neurotology is small, and there may be obvious postoperative manifestations of iatrogenic injury, including facial paralysis, hearing loss, vertigo, and imbalance. Consequently, otologists are especially concerned about malpractice claims for adverse outcomes of otologic procedures.

The Westlaw database (Thomas Reuters, New York, NY) is a web-based resource that compiles verdict and settlement reports from publically available state and federal court records. It has previously been of value in multiple otolaryngologic medical malpractice analyses including hearing loss,1 corticosteroid use,2 facial plastic surgery,3 facial nerve paralysis,4 iatrogenic tracheal stenosis,5 iatrogenic cranial nerve injury,6 iatrogenic cerebrospinal fluid leakage,7 and iatrogenic orbital injury.8 In this study, the database was utilized to analyze medical malpractice cases resulting from complications in otologic procedures in the United States (U.S.). To the best of our knowledge, this is the first analysis examining otologic malpractice litigation in the U.S.

Mathew et al.9 recently examined medical malpractice litigation related to otology in the United Kingdom (U.K.). Conclusions drawn from this paper can be useful to otologists in the U.S.; however, given the different legal structure, an examination of cases litigated in the U.S. is also of value. By analyzing litigation stemming from all otologic procedures and profiling outcomes, average payments, commonly litigated procedures, and other alleged factors important in determining legal responsibility, this analysis aims to educate otolaryngologists on legal vulnerabilities specific to otology. This information should help otolaryngologists to be aware of the otologic procedures and legal grounds where they are most vulnerable, to foster a safer environment for the practice of otology, and potentially improve patient care.

METHODS

The Westlaw database was searched in October 2012 for jury verdict and settlement reports related to medical malpractice in otologic procedures. Using the advanced search function, the term "medical malpractice" was searched in conjunction with terms relevant to otology. A total of 415 jury verdict and settlement reports were initially found. We specifically included all cases involving procedural complications in order to perform a focused, succinct analysis. Ultimately, 47 cases involving procedural complications were included in this analysis. Other cases were excluded for the following reasons: chief complaint unrelated to otology (182), duplicate verdict and settlement reports (95), not an otologic procedure (80), injury unrelated to the otologic complaint (8), and not medical malpractice (3).

Each case was examined for the outcome, award, alleged cause of malpractice, unfavorable outcomes such as requirement for additional surgery, and secondary complaints such as lack of informed consent. Demographic information including patient age, state, and year was also recorded.

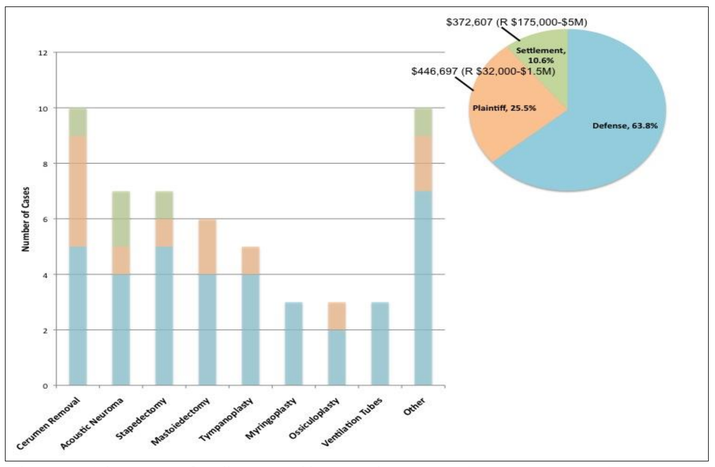

Figure 1. Trial outcomes for all cases and by procedure. Acoustic Neuroma=acoustic neuroma resection. Blue=defense verdict; Peach=plaintiff verdict; Green=settlement.

RESULTS

A total of 47 claims involving otologic procedures were included from 1988 to 2011. Of these, 63.8% resulted in a defense verdict, 25.5% resulted in a plaintiff verdict, and 10.6% resulted in a settlement (**Figure 1**). The average payment for plaintiff verdicts was $446,697 (Range $32,000-$1.5M), while the average payment for settlements was $372,607 (R- $175,000-$5M). Otolaryngologists were named in 28 cases, and of the 28 otolaryngologists, 5 were otologists. The subspecialty of the other 23 otolaryngologists was unspecified. Other specialties named were primary care (9), neurosurgery (5), anesthesia (4), plastic surgery (1), radiology (1), and non-medical doctors (4). The defendant specialty was unknown in 2 cases. Procedures frequently leading to litigation included cerumen removal, acoustic neuroma resection, stapedectomy, mastoidectomy, tympanoplasty, myringotomy, ventilation tube placement, and ossiculoplasty (**Figure 1**).

Cerumen removal was the most litigated procedure, mentioned in 21.3% (N=10) of cases **(Figure 1**). In the cerumen removal cases, primary care practitioners were mentioned in 8 (80.0%) cases, Otolaryngologists were mentioned in 2 (20.0%) cases, and 1 (10.0%) case did not specify specialty. One case mentioned both an Otolaryngologist and a primary care physician. It was not specified whether the Otolaryngologists were generalists or subspecialists like otologists. The method of cerumen removal was lavage in 5 (50.0%) cases and unspecified in 5 (50.0%) cases.

Hearing loss was the most common injury claimed and was mentioned in 53.2% (N=25) of cases (**Figure 2**). The highest proportion of cases resulting in payment was associated with facial nerve injury, tympanic membrane perforation, and hearing loss, with payment resulting in 6 out of 13 (46.2%), 5 out of 11 (45.5%), and 10 out of 25 (40.0%) cases respectively (**Figure 3**). Cases involving cerumen removal procedures were most likely to result in payment (50.0%) (**Figure 1**). Though less likely to result in payment, mean payments were highest for acoustic neuroma resection and stapedectomy ($3,498,587 ± $1,802,189 Standard Deviation and $2,733,000 ± $1,614,324 SD), followed by mastoidectomy ($780,000 ± $230,516 SD) (**Figure 4**).

The average payment by injury is shown in **Figure 5**. Alleged extremity paralysis and altered mental status resulted in the largest payments. The average payment for secondary factors is shown in **Figure 6**. When the claim involved failure to recognize complication or unnecessary procedure, the resulting payment was highest

The number and outcome of cases by jurisdiction is shown in **Figure 7**. The most cases were reported in California (9), but only 22.2% resulted in payment. No clear trend was evident over the time period represented in this study, and the number of cases resulting in payment remained relatively constant over time.

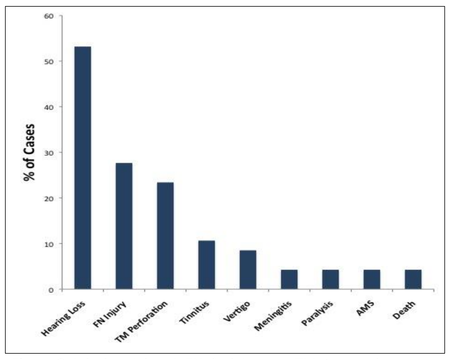

Figure 2. Injuries claimed. FN, facial nerve; TM, tympanic membrane; AMS, altered mental status.

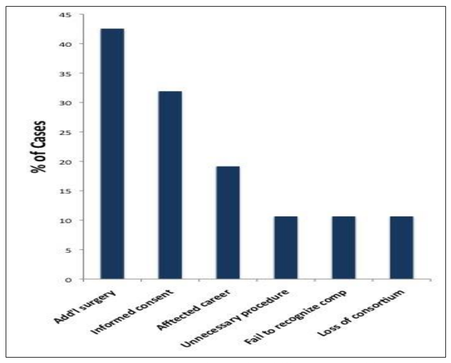

Figure 3. Secondary injuries claimed. Add'l surgery, additional surgery required; informed consent, lack of informed consent.

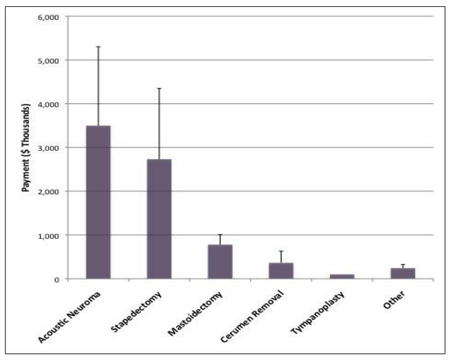

Figure 4. Mean payment by procedure. Error bars indicate standard deviation. Acoustic neuroma, acoustic neuroma resection.

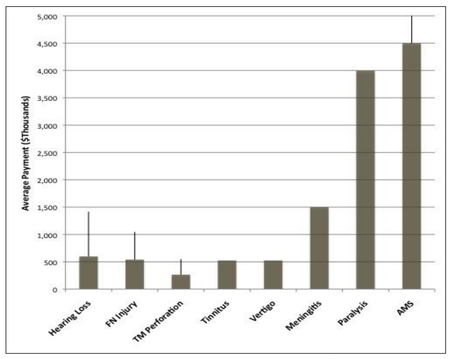

Figure 5. Mean payment by injury. Error bars indicate standard deviation. FN, facial nerve; TM, tympanic membrane; AMS, altered mental status.

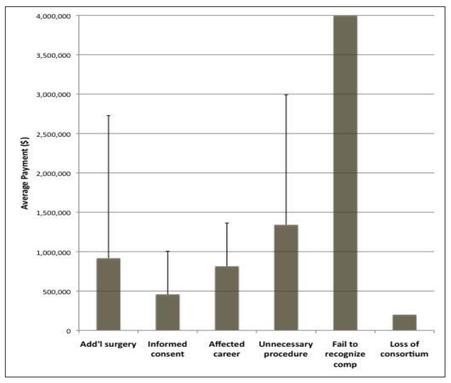

Figure 6. Mean payment by secondary injury. Error bars indicate standard deviation. Add'l surgery, additional surgery required; informed consent, lack of informed consent.

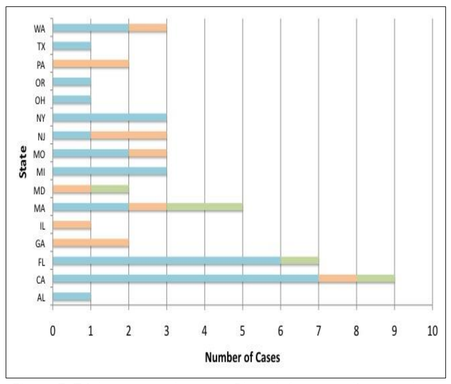

Figure 7. Trial outcomes by state. Blue, defense verdict; peach, plaintiff verdict; green, settlement.

DISCUSSION

In addition to time and energy spent attending to medicolegal issues, monetary costs associated with malpractice litigation are substantial and may be passed down to patients.[3,10-12] Rising malpractice insurance premiums, diminishing numbers of agencies offering coverage, considerable legal fees, and increasing damages awarded may all contribute to rising. Additionally, many physicians cite harm to professional reputation as even more important than the monetary costs associated with the medicolegal process.[13]

The most litigated procedure was cerumen removal (10 cases) (**Figure 1**), which was also the most likely procedure to result in payment (50%). However, the average award ($363,615) was lower than that for more complicated procedures (**Figure 1**). Cerumen impaction accounts for 12 million patient visits a year and cerumen removal is performed over 8 million times per year.[18] As it is often thought of as an innocuous procedure, physicians may be surprised to learn that cerumen removal resulted in the greatest number of malpractice cases. Otolaryngologists can take away two main points from this finding: 1) even the smallest of procedures is not immune to litigation, and 2) the same level of vigilance should be maintained while performing such common and low risk procedures like cerumen removal as is maintained during higher risk procedures because the threat of litigation is real.

Hearing loss, facial nerve injury, and tympanic membrane perforation were the most common injuries claimed and also resulted in the greatest number of payment results (**Figure 2**). These findings reinforce the importance of maintaining awareness of these potential complications during procedures. It is likely that these injuries were associated with payment to the plaintiff because of their consequences on quality of life. Hearing loss can be especially devastating to a patient who was once hearing and cause long-term functional, social, and psychological impairment.[19] Facial nerve injury may result in facial disfigurement, and the loss of oral competence and eye closure greatly impact a patient's quality of life. Furthermore, these complications may necessitate additional corrective procedures.

It is important to note that of the secondary factors leading to litigation, requirement for additional surgery and lack of informed consent were implicated in most cases (**Figure 3**). The significance of these two factors is consistent among many medical malpractice analyses across different subjects.[3,6,8] For example, Svider et al.[6] found that informed consent and need for additional surgery were the two most commonly alleged secondary factors present in 25.4% and 25.8% of cranial nerve injury cases respectively. While it is obvious that physicians should aim to minimize procedural complications leading to the need for additional surgeries, it cannot always be controlled. On the other hand, providing patients with a more thorough informed consent is a very simple and feasible way to address a major factor in otologic malpractice litigation.

The Westlaw database provides a detailed collection of medical malpractice cases and has been used in numerous other studies to examine malpractice litigation.[1-6,8,10,14-16] As a compilation of verdicts and settlement reports from publically available state and federal court records, the database does have its limitations. Reporting varies by jurisdiction in an unpredictable manner and relevant cases may be missing. Furthermore, the detail provided for each case is highly variable, ranging from inclusion of only basic information to a comprehensive description of the case. Despite these limitations, legal professionals utilize this database for gathering and analyzing information in their respective fields, and the information obtained has proven valuable in multiple publications.[3,5,6,8,10,14-16]

CONCLUSIONS

Cerumen removal was the most commonly litigated procedure and hearing loss was the most common injury claimed in this analysis. However, when the plaintiff was successful, payment was highest for more complicated procedures including acoustic neuroma resections and stapedectomies. In addition, lack of informed consent was mentioned in a substantial number of cases. This highlights the role of patient expectations when deciding to take legal action and reemphasizes the importance of open, thorough, and clear communication with patients especially in the perioperative period. Finally, though a defense verdict was reached in 63.8% of cases, physicians can help prevent reputational damage and opportunity costs associated with litigation by taking steps not only to decrease complications that lead to payment, but also to avoid litigation even if it does result in the physician's favor.

References

1. Reilly BK, Horn GM, Sewell RK. Hearing loss resulting in malpractice litigation: what physicians need to know. Laryngoscope. 2013;123:112-117. 2. Nash JJ, Nash AG, Leach ME, Poetker DM. Medical malpractice and corticosteroid use. Otolaryngol Head Neck Surg. 2011;144:10-15. 3. Svider PF, Keeley BR, Zumba O, Mauro AC, Setzen M, Eloy JA. From the operating room to the courtroom: a comprehensive characterization of litigation related to facial plastic surgery procedures [published online January 8, 2013]. Laryngoscope. doi: 10.1002/lary.23905. 4. Lydiatt DD. Medical malpractice and facial nerve paralysis. Arch Otolaryngol Head Neck Surg. 2003;129:50-53. 5. Svider PF, Pashkova AA, Husain Q, et al. Determination of legal responsibility in iatrogenic tracheal and laryngeal stenosis. Laryngoscope. 2013;123:1754-1758. 6. Svider PF, Sunaryo PL, Keeley BR, Kovalerchik O, Mauro AC, Eloy JA. Characterizing liability for cranial nerve injuries: a detailed analysis of 209 malpractice trials. Laryngoscope. 2013;123:1156-1162. 7. Kovalerchik O, Mady LJ, Svider PF, et al. Physician account- ability in iatrogenic cerebrospinal fluid leak litigation [published online March 27, 2013]. Int Forum Allergy Rhinol. doi: 10.1002/alr.21169. 8. Svider PF, Kovalerchik O, Mauro AC, Baredes S, Eloy JA. Legal liability in iatrogenic orbital injury [published online February 12, 2013]. Laryngoscope. doi: 10.1002/lary.24000. 9. Mathew R, Asimacopoulos E, Valentine P. Toward safer practice in otology: a report on 15 years of clinical negligence claims. Laryngoscope. 2011;121:2214-2219. 10. Svider PF, Husain Q, Kovalerchik O, et al. Determining legal responsibility in otolaryngology: a review of 44 trials since 2008 [published online January 15, 2013]. Am J Otolaryngol. doi: 10.1016/j.amjoto.2012.12.005. 11. Lynn-Macrae AG, Lynn-Macrae RA, Emani J, Kern RC, Conley DB. Medicolegal analysis of injury during endoscopic sinus surgery. Laryngoscope. 2004;114:1492-1495. 12. Anderson GF, Hussey PS, Frogner BK, Waters HR. Health spending in the United States and the rest of the industrialized world. Health Aff (Millwood). 2005;24:903-914. 13. Hermer LD, Brody H. Defensive medicine, cost containment, and reform. J Gen Intern Med. 2010;25:470-473. 14. Hertz BT, Arthurs J. Malpractice rates plateauing. The only thing to fear may be fear itself. Med Econ. 2011;88:24-25, 28-29, 32. 15. Studdert DM, Mello MM, Gawande AA, et al. Claims, errors, and compensation payments in medical malpractice litigation. N Engl J Med. 2006;354:2024-2033. 16. Brooks RG, Menachemi N, Hughes C, Clawson A. Impact of the medical professional liability insurance crisis on access to care in Florida. Arch Intern Med. 2004;164:2217-2222. 17. Nahed BV, Babu MA, Smith TR, Heary RF. Malpractice liability and defensive medicine: a national survey of neurosurgeons. PloS one. 2012;7:e39237. 18. Mello MM, Kachalia A, Goodell S. Medical malpractice— April 2011 update. Synth Proj Res Synth Rep. 2011;21(suppl 1):pii: 72097. 19. Brenner RJ, Smith JJ. The malpractice liability crisis. J Am Coll Radiol. 2004;1:18-22. 20. Loughlin KR. Medical malpractice: the good, the bad, and the ugly. Urol Clin North Am. 2009;36:101-110, vii. 21. Eloy JA, Svider PF, Patel D, Setzen M, Baredes S. Comparison of plaintiff and defendant expert witness qualification in malpractice litigation in otolaryngology. Otolaryngol Head NeckSurg. 2013;148:764-769. 22. Burkle CM, Martin DP, Keegan MT. Which is feared more harm to the ego or financial peril? A survey of anesthesiologists' attitudes about medical malpractice. Minn Med. 2012; 95:46-50. 23. Lydiatt DD. Medical malpractice and cancer of the larynx. Laryngoscope. 2002;112:445-448. 24. Lydiatt DD. Medical malpractice and head and neck cancer. Curr Opin Otolaryngol Head Neck Surg. 2004;12:71-75. 25. Lydiatt DD. Medical malpractice and the thyroid gland. Head Neck. 2003;25:429-431. 26. Department of Health. NHS indemnity arrangements for handling clinical negligence claims against NHS staff. HSG. 1996;96. 27. Mitka M. Cerumen removal guidelines wax practical. JAMA.2008;300:1506. 28. Cheng S, Naidoo Y, da Cruz M, Dexter M. Quality of life inpostoperative vestibular schwannoma patients. Laryngoscope.2009;119:2252-2257. 29. Jena AB, Chandra A, Lakdawalla D, Seabury S. Outcomes of medical malpractice litigation against US physicians. Arch Intern Med. 2012;172:892-894. 30. Carroll AE, Parikh PD, Buddenbaum JL. The impact of defense expenses in medical malpractice claims. J Law Med Ethics.2012;40:135-142.

Robert W. Jyung, MD
Assistant Professor
Director, Otology and Neurotology
Department of Otolaryngology – Head and Neck Surgery
Rutgers New Jersey Medical School
90 Bergen Street., Suite 8100
Newark, NJ 07103
jyungrw@njms.rutgers.edu

CORRESPONDING AUTHOR