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***Retrospective Study***

**Medical malpractice litigation involving otolaryngology residents and fellows: A case-based 30-year review**

Suresh NV *et al*. Litigation of otolaryngology trainees

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**Abstract**

BACKGROUND

Errors, misdiagnoses, andcomplications can occur while trainees are involved in patient care. Analysis of such events could reveal areas for improvement by residency and fellowship programs.

AIM

To examine lawsuits tried at the state and federal level involving otolaryngology trainees.

METHODS

The LexisNexis database, an online legal research database containing state and federal case records from across the United States, was retrospectively reviewed for malpractice cases involving otolaryngology residents or fellows from January 1, 1990 to December 31, 2020. Case data collected: Plaintiff/trainee/defendant characteristics, allegations, medical outcomes, and legal outcomes.

RESULTS

Over the study period, 20 malpractice lawsuits involving otolaryngology trainees were identified. Plaintiffs raised numerous allegations including procedural error (*n* = 12, 25.5%), incorrect diagnosis and/or treatment (*n* = 8, 17.0%), and lack of knowledge of trainee involvement (*n* = 6, 12.8%). Nine cases (45%) had verdicts in favor of the plaintiff, whereas 5 cases (25%) had verdicts in favor of the defense. Six cases (30%) ended in a settlement. Awards to plaintiffs were heterogenous, with a median of $617,500 (range $32K-17M) for settled cases and verdicts favoring plaintiffs.

CONCLUSION

The findings enclosed herein represent the first published analysis of trainee involvement in otolaryngology malpractice cases held at the state/federal level. Otolaryngology trainees can be involved in lawsuits for both procedural and nonprocedural events. This study highlights the importance of education specifically in the domains of procedural errors, informed consent, proper diagnosis/management, and clear communication within patient care teams. Training programs should incorporate these study findings into effective simulation courses and didactic sessions. Educating trainees about common pitfalls holds the promise of decreasing healthcare systems costs, reducing trainee burnout, and, most importantly, benefiting patients.

**Key Words:** Malpractice; Otolaryngology; Education; Trainees; Litigation; Quality improvement

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**Core Tip:** Prior reports indicate that surgeons will face at least one malpractice lawsuit during their career. Malpractice suits and the threat thereof may pose a significant psychological burden on young otolaryngologists. Preparation for such a situation should be embedded into residency curricula, yet no prior study has reported on the topic of otolaryngology trainee litigation on a state/federal level. The reported cases highlight the importance of thorough informed consent, proper diagnosis/management, and clear communication between attending physicians and trainees. Incorporating these seminal cases into the existing literature would support preemptive educational efforts and provide evidence-based insight for trainees in a legal predicament.

**INTRODUCTION**

Otolaryngologists operate in anatomically challenging territory composed of delicate structures. Even with adequate experience and expertise, complications can and, unfortunately, do occur. The most concerning of such adverse events include anoxic brain injury, vision loss, hearing loss, vocal cord paralysis, facial paralysis, suffocation, and even death. As a result, otolaryngology is a specialty that is especially prone malpractice litigation[1]. Prior reports indicate that physicians in high-risk specialties will face at least one medical malpractice lawsuit during their career[2]. Malpractice laws were initially instituted to create physician accountability and uphold patient safety. Consequences of such lawsuits can culminate in burnout and the adoption of defensive medicine, defined as the administration of additional procedures or refusal to treat due to a threat of litigation[3-8].

Residents and fellows (trainees) are considered physicians but operate under the supervision and responsibility of attending physicians. By law, under the doctrine of *respondeat superior*, translated as “let the master answer,” the employer, the attending physician, is liable for the acts of their agents, the trainees[9]. Despite this legal doctrine, trainees are not fully protected from their mistakes. Previous analyses of medical malpractice claims identified residents as defendants in 30% of claims and in 18% of surgery-related litigation trials[10-13]. Although prior literature has examined malpractice cases in all subspecialties within the field of otolaryngology, no prior report has specifically investigated litigation against trainees[14-19].

The current study investigates lawsuits that include otolaryngology trainees as defendants. A thorough understanding of these cases serves to offer useful insight into areas of improvement in otolaryngology residency and fellowship programs. Learning from these common allegations can help minimize adverse outcomes and future lawsuits, as well as alleviate physician anxiety, decrease potential burnout, and ultimately cultivate a safer environment for the benefit of patients.

**MATERIALS AND METHODS**

An institutional subscription was used to log into the LexisNexis legal database. This collection stores every appellate federal and state case spanning from January 1790 to present day[20,21]. LexisNexis was specifically used because it is one of the most heavily cited databases in the literature investigating medical malpractice litigation. Additionally, many hospitals and health systems employ the LexisNexis database to inform hiring and risk management decisions[20,22-25]. This study does not constitute human subject research and was deemed exempt from review by the University of Pennsylvania Institutional Review Board.

The LexisNexis database was queried for litigation involving otolaryngology trainees between January 1st, 1990 and December 31st 2020. Keywords used to search the database included (“residency” or “resident” or “fellow” or “trainee” or "post graduate" or "first year" or "1st year" or "second year" or "2nd year" or "third year" or "3rd year" or "fourth year" or "4th year" or "fifth year" or "5th year" or fellow or fellowship) and (otolaryn\* or "ear" or "nose" or "throat") and malpractice. Our search query yielded a total of 247 cases, each of which was reviewed by 3 authors (NVS, VNS, EN). There was 100% consensus among all authors.

To be included, cases must have cited involvement of an otolaryngology trainee (residents or fellows) in the allegation by the plaintiff. The otolaryngology trainee however did not need to be listed as a defendant in the case.

Case data collected included: plaintiff/trainee/defendant characteristics, case characteristics, allegations, medical outcomes, and legal outcomes. Allegations were designated as follows: delay in evaluation, incorrect diagnosis/treatment, procedural error, lack of informed consent of procedure/complication, lack of informed consent of resident being involved, failure to supervise resident, inexperienced trainee(s), prolonged operative time, and lack of or incorrect communication between trainee and attending. Descriptive statistical analysis was performed using SPSS Statistics software (IBM, Armonk, NY). Data were expressed as mean ± standard deviation (SD) or median (interquartile range [IQR])[26].

**RESULTS**

Of the 247 search results of malpractice cases within the field of otolaryngology during the study period, 20 cases involved otolaryngology residents or fellows and were included in the study (Table 1). In total, the malpractice lawsuits included 20 plaintiffs, 48 defendants, and spanned 11 different states. The most common geographic location was New York (*n* = 5). These cases involved 14 (70%) female patients and 6 (30%) male patients. Post graduate year (PGY) of residents was available for 7 of the 20 cases, of which 3 cases involved junior trainees (PGY 1-3) and 4 cases involved senior trainees (PGY 4-5 or fellow). On average, these cases had 2.4 ± 2.1 (mean ± SD) defendants. An otolaryngology trainee was directly involved in each of the 20 cases and 5 cases initially named the trainee as one of the defendants. No case listed the trainee as the only defendant. The frequency of reports demonstrated a downward trend in recent decades: 1990-2000, 9 cases; 2001-2010, 7 cases; and 2011-2020, 4 cases.

***Allegations***

The allegations made by the plaintiffs were reviewed and categorized (Table 2). A total of 47 allegations were made. Of the 20 cases, 17 (85%) reported multiple adverse events, and the most frequent allegation claimed by the plaintiffs was procedural error (*n* = 12, 25%). With regard to procedural error, those most commonly cited were damage to the stapes and oval window during removal of middle ear cholesteatoma, recurrent laryngeal and long thoracic nerve injury, and damage to the lamina papyracea during functional endoscopic sinus surgery (FESS). Ten of the 12 procedural errors resulted in complications manifesting postoperatively. Interestingly, concurrent allegations occurring within these 12 cases that alleged procedural errors included: (1) Lack of informed consent for residents being involved in the operation (*n* = 5); and (2) Trainee inexperience (*n* = 5), and 3) a failure to supervise the resident during the operation (*n* = 4).

The second most frequently cited allegation was incorrect diagnosis or treatment of the patient’s medical condition (*n* = 8, 17%). Three of these allegations occurred during the initial otolaryngology clinic visit where the patient was seen by a resident physician and 5 occurred in the perioperative period. Of the 8 cases alleging incorrect diagnosis or treatment, 3 cases also concurrently alleged that the resident physician failed to communicate and inform the attending physician of any issue.

Less commonly, the topic of informed consent arose without concurrent allegation of procedural error. Out of the 20 cases included in the study, there were 4 allegations referencing lack of informed consent for procedural complications and 6 allegations referencing lack of informed consent for residents being present during the procedure.

***Adverse medical outcomes***

The medical outcomes of each of the 20 cases were categorized (Table 3). The most common outcomes included anoxic encephalopathy leading to a persistent vegetative state (*n* = 7, 35%) and death (*n* = 4, 20%). Other less commonly reported outcomes included cranial nerve injuries (facial nerve, recurrent laryngeal nerve, accessory nerve XI) (*n* = 4, 20%), hearing loss (*n* = 2, 10%), vision loss (*n* = 2, 10%) and cerebrospinal fluid leak (*n* = 1, 5%).

***Legal outcomes: Settlements and awards***

A total of 9 (45%) cases had verdicts in favor of the plaintiff, whereas 5 cases had verdicts in favor of the defense (25%). Six (30%) cases ended in a settlement. The overall median award to the plaintiffs was $617500 (IQR, $24490-$2937500). Of the cases that were ruled in favor of the plaintiff, the median payout was $2200000 (IQR, $750000-12876069). Of the cases that were settled, the median payout was $792500 (IQR, $458750-3800000).

**DISCUSSION**

In the current study, we analyzed state and federal malpractice litigation wherein otolaryngology trainees were involved or named as defendants. This is the first report to specifically analyze trainee involvement in otolaryngology malpractice cases. Our analysis highlights the importance of procedural training, informed consent, and communication between patients, trainees, and attending physicians. These areas for improvement are similar to those identified in previous literature on trainee litigation in other specialties[27-29]. Given the significant healthcare costs associated with litigation and its contribution to physician burnout, it is critical to understand the causes of malpractice suits[4,7,6,11]. In doing so, the specialty can adjust medical training, reduce defensive medicine practices, and improve patient outcomes.

Procedural error and incorrect diagnosis/treatment by a trainee were the most common allegations by plaintiffs. There is a steep learning curve for trainees as they acquire new skills during training, yet patients hold trainees to the same standard as attending physicians despite trainees not having matured their surgical skills[30]. Certain steps may be taken to mitigate the risk of complications, such as increasing the experience threshold at which trainees can independently perform procedures (graduated autonomy)[31]. Increasing use of simulation courses for trainees to practice maneuvers and prepare for medical errors in a controlled setting are options for accelerating the learning curve[32-35]. These simulations might include airway emergencies, near miss events, common surgical errors, and post-surgical complications[36]. With regards to otolaryngology specifically, 3D printed models have been used to mimic complex surgical anatomy during temporal bone dissection and endoscopic sinus surgery in order to allow hands on surgical practice[37-42]. Other training modalities such as virtual reality and artificial intelligence simulators are also emerging, though their use is currently limited by the lack of haptic feedback and the cost of training[37,43-46].

Importantly, our sample included allegations that residents failed to inform the supervising physician of the severity of postoperative complications. Failure to recognize life threatening findings, fear of repercussions, or miscommunication may play a role in residents failing to report concerning findings to attending physicians. Failure to diagnose or initiate appropriate treatment for such cases could be due to an incomplete clinical gestalt early in residency. Otolaryngology in particular consists of pathology that is beyond the scope of most medical school curriculums in the United States and abroad[47-51]. Allowing for weekly interactive didactic sessions that not only provide traditional lecture style learning, but also incorporate case-based applications can improve short- and long-term retention of information[52-55]. Simulations coupled with effective didactic sessions can help residents recognize emergencies or critical diagnoses, decrease their response time, and allow for appropriate action or escalation of care. Taken together, this could effectively reduce medical errors and improve outcomes for patients.

Lack of informed consent regarding procedural risks or resident participation was also commonly alleged. Some plaintiffs claimed they were not appropriately informed of procedural risks, while others claim they were not aware of resident involvement in surgical care. These miscommunication claims suggest a disconnect in patient-physician relationships and an incomplete consent process. An important first step in implementing a standardized informed consent process involves training residents to acquire consent through didactic sessions and standardized patient encounters[56-59]. Due to the complicated nature of many ENT procedures, it is possible for trainees to be unaware of all possible complications and procedural risks. Particularly at teaching hospitals and clinics, where residents are regularly involved in patient care, we recommend that informed consent process is standardized to include disclosure of trainees participating in all care provided[60-62]. Such open communication and detailed documentation are vital parts of a positive patient-physician relationship and can minimize litigation[20].

The majority of cases included in this study were ruled in favor of the plaintiffs. Importantly, even when cases were ruled in favor of the defendants, medical malpractice lawsuits can leave lasting consequences. First, malpractice litigation costs the healthcare system billions of dollars in fees, lost productivity, and the costs of defensive medicine[4,11]. In just the lawsuits included in this study, over 63 million dollars in payouts were issued. In addition, many studies have linked malpractice lawsuits to physician depression, burnout, and decreased quality of life[4,11,63-65]. One study reported that many trainees are unaware of their vulnerability to malpractice lawsuits during training[11]. This suggests that there is a lack of resident education concerning malpractice lawsuits. Therefore, the authors recommend providing trainees with formal malpractice education that integrates faculty disclosure and the cases reported herein. This would be an important step toward reducing medical errors and helping trainees understand available resources should they be implicated in litigation[36,66].

From an international perspective, litigation in the field of otolaryngology has been examined in great detail[67-71]. In a recent study in China, the highest rates medical malpractice claims among all specialties were observed in otolaryngology (51.9%)[72]. Despite this preponderance of litigation, no prior international literature exists on incidents of trainee malpractice cases. Given that Otolaryngologists in training would arguably derive the most benefit from enhanced education on the topic of medicolegal issues, one would expect more studies from abroad to focus on legal pitfalls encountered by trainees. Further investigation of resident and fellow malpractice cases in other countries are warranted, which collectively would serve to inform education-based efforts.

There are several limitations to this study. First, the LexisNexis legal database only contains cases conducted at the state and federal level. A number of malpractice cases are resolved prior to trial, limiting the number of cases publicly available. Furthermore, LexisNexis does not standardize the information, meaning the medical, legal and demographic information provided was variable and limited. The medical records for the plaintiffs and the cases were not available, so the cases could not be verified for the accuracy of the clinical events that occurred. Moreover, LexisNexis relies on individual attorneys to submit trial documents. There could be allegations of medical malpractice that have not yet been released to this database by the involved law firms, which could explain why fewer reported cases were observed in more recent decades. Whether the alleged errors were attributable to factors that could be addressed in training or intrinsic personal skill remains a matter of speculation. Finally, cases that involved otolaryngology trainees could have been excluded if these trainees were not explicitly mentioned using one of the search criteria utilized in this study. Additionally, trainees were not listed with personal identifying information in case records, so there was no way to check for potential misclassification of trainees.

**CONCLUSION**

Otolaryngology residents and fellows can be involved in malpractice lawsuits for bothprocedural and nonprocedural events. This study highlights the importance of malpractice education specifically within the domains of procedural errors, informed consent, proper diagnosis and management, and clear communication within patient care teams. Limiting malpractice litigation by addressing these domains holds the potential to decrease trainee burnout and, more importantly, improve patient outcomes.

**ARTICLE HIGHLIGHTS**

***Research background***

Errors, misdiagnoses, andcomplications can occur while trainees are involved in patient care. Analysis of such events could reveal areas for improvement by residency and fellowship programs.

***Research motivation***

Understand lawsuits tried at the state and federal level involving otolaryngology trainees.

***Research objectives***

To examine lawsuits tried at the state and federal level involving otolaryngology trainees.

***Research methods***

The LexisNexis database, an online legal research database containing state and federal case records from across the United States, was retrospectively reviewed for malpractice cases involving otolaryngology residents or fellows from January 1, 1990 to December 31, 2020. Case data collected: Plaintiff/trainee/defendant characteristics, allegations, medical outcomes, and legal outcomes.

***Research results***

Over the study period, 20 malpractice lawsuits involving otolaryngology trainees were identified. Plaintiffs raised numerous allegations including procedural error (*n* = 12, 25.5%), incorrect diagnosis and/or treatment (*n* = 8, 17.0%), and lack of knowledge of trainee involvement (*n* = 6, 12.8%). Nine cases (45%) had verdicts in favor of the plaintiff, whereas 5 cases (25%) had verdicts in favor of the defense. Six cases (30%) ended in a settlement. Awards to plaintiffs were heterogenous, with a median of $617,500 (range $32K-17M) for settled cases and verdicts favoring plaintiffs.

***Research conclusions***

The findings enclosed herein represent the first published analysis of trainee involvement in otolaryngology malpractice cases held at the state/federal level. Otolaryngology trainees can be involved in lawsuits for both procedural and nonprocedural events. This study highlights the importance of education specifically in the domains of procedural errors, informed consent, proper diagnosis/management, and clear communication within patient care teams.

***Research perspectives***

Training programs should incorporate these study findings into effective simulation courses and didactic sessions. Educating trainees about common pitfalls holds the promise of decreasing healthcare systems costs, reducing trainee burnout, and, most importantly, benefiting patients.

**REFERENCES**

1 **Ceremsak J**, Miller LE, Gomez ED. A Review of Otolaryngology Malpractice Cases with Associated Court Proceedings from 2010 to 2019. *Laryngoscope* 2021; **131**: E1081-E1085 [PMID: 33146898 DOI: 10.1002/lary.29232]

2 **Jena AB,** Seabury S, Lakdawalla D, Chandra A. Malpractice risk according to physician specialty. *N Engl J Med* 2011; **365**: 629-636 [DOI: 10.1056/NEJMsa1012370]

3 **Bal BS**. An introduction to medical malpractice in the United States. *Clin Orthop Relat Res* 2009; **467**: 339-347 [DOI: 10.1007/s11999-008-0636-2]

4 **Balch CM**, Oreskovich MR, Dyrbye LN, Colaiano JM, Satele DV, Sloan JA, Shanafelt TD. Personal consequences of malpractice lawsuits on American surgeons. *J Am Coll Surg* 2011; **213**: 657-667 [PMID: 21890381 DOI: 10.1016/j.jamcollsurg.2011.08.005]

5 **Studdert DM**, Mello MM, Sage WM, DesRoches CM, Peugh J, Zapert K, Brennan TA. Defensive medicine among high-risk specialist physicians in a volatile malpractice environment. *JAMA* 2005; **293**: 2609-2617 [PMID: 15928282 DOI: 10.1001/jama.293.21.2609]

6 **Elmore LC**, Jeffe DB, Jin L, Awad MM, Turnbull IR. National Survey of Burnout among US General Surgery Residents. *J Am Coll Surg* 2016; **223**: 440-451 [PMID: 27238875 DOI: 10.1016/j.jamcollsurg.2016.05.014]

7 **Seabury SA**, Chandra A, Lakdawalla DN, Jena AB. On average, physicians spend nearly 11 percent of their 40-year careers with an open, unresolved malpractice claim. *Health Aff (Millwood)* 2013; **32**: 111-119 [PMID: 23297278 DOI: 10.1377/hlthaff.2012.0967]

8 **Orosco RK**, Talamini J, Chang DC, Talamini MA. Surgical malpractice in the United States, 1990-2006. *J Am Coll Surg* 2012; **215**: 480-488 [PMID: 22676963 DOI: 10.1016/j.jamcollsurg.2012.04.028]

9 **Regan JJ**, Regan WM. Medical malpractice and respondeat superior. *South Med J* 2002; **95**: 545-548 [PMID: 12005015]

10 **Studdert DM**, Mello MM, Gawande AA, Gandhi TK, Kachalia A, Yoon C, Puopolo AL, Brennan TA. Claims, errors, and compensation payments in medical malpractice litigation. *N Engl J Med* 2006; **354**: 2024-2033 [PMID: 16687715 DOI: 10.1056/NEJMsa054479]

11 **Zhao B**, Cajas-Monson LC, Ramamoorthy S. Malpractice allegations: A reality check for resident physicians. *Am J Surg* 2019; **217**: 350-355 [PMID: 30172360 DOI: 10.1016/j.amjsurg.2018.08.006]

12 **Thiels CA**, Choudhry AJ, Ray-Zack MD, Lindor RA, Bergquist JR, Habermann EB, Zielinski MD. Medical Malpractice Lawsuits Involving Surgical Residents. *JAMA Surg* 2018; **153**: 8-13 [PMID: 28854303 DOI: 10.1001/jamasurg.2017.2979]

13 **Kang FG**, Kendall MC, Kang JS, Malgieri CJ, De Oliveira GS. Medical Malpractice Lawsuits Involving Anesthesiology Residents: An Analysis of the National Westlaw Database. *J Educ Perioper Med* 2020; **22**: E650 [PMID: 33447649 DOI: 10.46374/volxxii-issue4-deoliveira]

14 **Hong SS**, Yheulon CG, Wirtz ED, Sniezek JC. Otolaryngology and medical malpractice: A review of the past decade, 2001-2011. *Laryngoscope* 2014; **124**: 896-901 [PMID: 24105798 DOI: 10.1002/lary.24377]

15 **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 [PMID: 15280732 DOI: 10.1097/00005537-200408000-00032]

16 **Ruhl DS**, Hong SS, Littlefield PD. Lessons learned in otologic surgery: 30 years of malpractice cases in the United States. *Otol Neurotol* 2013; **34**: 1173-1179 [PMID: 23921931 DOI: 10.1097/MAO.0b013e318298a8fb]

17 **Morris LG**, Lieberman SM, Reitzen SD, Edelstein DR, Ziff DJ, Katz A, Komisar A. Characteristics and outcomes of malpractice claims after tonsillectomy. *Otolaryngol Head Neck Surg* 2008; **138**: 315-320 [PMID: 18312878 DOI: 10.1016/j.otohns.2007.11.024]

18 **Song SA**, Tolisano AM, Camacho M. Laryngology litigation in the United States: Thirty years in review. *Laryngoscope* 2016; **126**: 2301-2304 [PMID: 26763607 DOI: 10.1002/lary.25866]

19 **Tolisano AM**, Bager JM. Sleep surgery and medical malpractice. *Laryngoscope* 2014; **124**: E250-E254 [PMID: 24347364 DOI: 10.1002/lary.24559]

20 **Tripathi R**, Ezaldein HH, Rajkumar K, Bordeaux JS, Scott JF. Characteristics of State and Federal Malpractice Litigation of Medical Liability Claims for Keratinocyte Carcinoma, 1968 to 2018. *JAMA Dermatol* 2019; **155**: 812-818 [PMID: 31090874 DOI: 10.1001/jamadermatol.2019.0430]

21 **LexisNexis**. LexisNexis Academic user guide, 2020

22 **Gaither TW**, Copp HL. State appellant cases for testicular torsion: Case review from 1985 to 2015. *J Pediatr Urol* 2016; **12**: 291.e1-291.e5 [PMID: 27140000 DOI: 10.1016/j.jpurol.2016.03.008]

23 **Jeffres MN**, Hall-Lipsy EA, King ST, Cleary JD. Systematic review of professional liability when prescribing β-lactams for patients with a known penicillin allergy. *Ann Allergy Asthma Immunol* 2018; **121**: 530-536 [PMID: 29551402 DOI: 10.1016/j.anai.2018.03.010]

24 **Lekovic GP**, Harrington TR. Litigation of missed cervical spine injuries in patients presenting with blunt traumatic injury. *Neurosurgery* 2007; **60**: 516-22; discussion 522-3 [PMID: 17327797 DOI: 10.1227/01.NEU.0000255337.80285.39]

25 **Minicucci RF**, Lewis BF. Trouble in academia: ten years of litigation in medical education. *Acad Med* 2003; **78**: S13-S15 [PMID: 14557083 DOI: 10.1097/00001888-200310001-00005]

26 **Watane A**, Kalavar M, Chen EM, Mruthyunjaya P, Cavuoto KM, Sridhar J, Parikh R. Medical Malpractice Lawsuits Involving Ophthalmology Trainees. *Ophthalmology* 2021; **128**: 938-942 [PMID: 33068616 DOI: 10.1016/j.ophtha.2020.10.013]

27 **Greenberg CC**, Regenbogen SE, Studdert DM, Lipsitz SR, Rogers SO, Zinner MJ, Gawande AA. Patterns of communication breakdowns resulting in injury to surgical patients. *J Am Coll Surg* 2007; **204**: 533-540 [PMID: 17382211 DOI: 10.1016/j.jamcollsurg.2007.01.010]

28 **ElBardissi AW**, Regenbogen SE, Greenberg CC, Berry W, Arriaga A, Moorman D, Retik A, Warshaw AL, Zinner MJ, Gawande AA. Communication practices on 4 Harvard surgical services: a surgical safety collaborative. *Ann Surg* 2009; **250**: 861-865 [PMID: 19855264 DOI: 10.1097/SLA.0b013e3181afe0db]

29 **Riesenberg LA**, Leitzsch J, Massucci JL, Jaeger J, Rosenfeld JC, Patow C, Padmore JS, Karpovich KP. Residents' and attending physicians' handoffs: a systematic review of the literature. *Acad Med* 2009; **84**: 1775-1787 [PMID: 19940588 DOI: 10.1097/ACM.0b013e3181bf51a6]

30 **Kachalia A**, Studdert DM. Professional liability issues in graduate medical education. *JAMA* 2004; **292**: 1051-1056 [PMID: 15339896 DOI: 10.1001/jama.292.9.1051]

31 **Myers LC**, Gartland RM, Skillings J, Heard L, Bittner EA, Einbinder J, Metlay JP, Mort E. An Examination of Medical Malpractice Claims Involving Physician Trainees. *Acad Med* 2020; **95**: 1215-1222 [PMID: 31833853 DOI: 10.1097/ACM.0000000000003117]

32 **Gable B**, Ahmed R. Simulation-based interprofessional conference: a focus on patient handoffs and critical communication. *BMJ Simul Technol Enhanc Learn* 2019; **5**: 178-179 [PMID: 35514948 DOI: 10.1136/bmjstel-2017-000260]

33 **Hogan CJ**, Winters R. The Current Role of Medical Simulation in Otolaryngology. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing, 2022 [PMID: 32310591]

34 **Deutsch ES**, Wiet GJ, Seidman M, Hussey HM, Malekzadeh S, Fried MP. Simulation Activity in Otolaryngology Residencies. *Otolaryngol Head Neck Surg* 2015; **153**: 193-201 [PMID: 26019133 DOI: 10.1177/0194599815584598]

35 **Masood MM**, Stephenson ED, Farquhar DR, Farzal Z, Shah PV, Buckmire RA, McClain WG, Clark JM, Thorp BD, Kimple AJ, Ebert CS Jr, Kilpatrick LA, Patel SN, Shah RN, Zanation AM. Surgical simulation and applicant perception in otolaryngology residency interviews. *Laryngoscope* 2018; **128**: 2503-2507 [PMID: 29696657 DOI: 10.1002/lary.27211]

36 **Fischer MA**, Mazor KM, Baril J, Alper E, DeMarco D, Pugnaire M. Learning from mistakes. Factors that influence how students and residents learn from medical errors. *J Gen Intern Med* 2006; **21**: 419-423 [PMID: 16704381 DOI: 10.1111/j.1525-1497.2006.00420.x]

37 **Musbahi O**, Aydin A, Al Omran Y, Skilbeck CJ, Ahmed K. Current Status of Simulation in Otolaryngology: A Systematic Review. *J Surg Educ* 2017; **74**: 203-215 [PMID: 27839694 DOI: 10.1016/j.jsurg.2016.09.007]

38 **James J**, Irace AL, Gudis DA, Overdevest JB. Simulation training in endoscopic skull base surgery: A scoping review. *World J Otorhinolaryngol Head Neck Surg* 2022; **8**: 73-81 [PMID: 35619934 DOI: 10.1002/wjo2.11]

39 **Lavigne P,** Yang N. Training and surgical simulation in skull base surgery: a systematic review. *Curr Otorhinolaryngol Rep* 2020; **8**: 154-159 [DOI: 10.1007/s40136-020-00280-z]

40 **AlQahtani AA**, Albathi AA, Alhammad OM, Alrabie AS. Innovative real CSF leak simulation model for rhinology training: human cadaveric design. *Eur Arch Otorhinolaryngol* 2018; **275**: 937-941 [PMID: 29435644 DOI: 10.1007/s00405-018-4902-y]

41 **AlQahtani A**, Albathi A, Castelnuovo P, Alfawwaz F. Cerebrospinal Fluid Leak Repair Simulation Model: Face, Content, and Construct Validation. *Am J Rhinol Allergy* 2021; **35**: 264-271 [PMID: 32819147 DOI: 10.1177/1945892420952262]

42 **Zheng JP**, Li CZ, Chen GQ, Song GD, Zhang YZ. Three-Dimensional Printed Skull Base Simulation for Transnasal Endoscopic Surgical Training. *World Neurosurg* 2018; **111**: e773-e782 [PMID: 29309974 DOI: 10.1016/j.wneu.2017.12.169]

43 **Kim DH**, Kim HM, Park JS, Kim SW. Virtual Reality Haptic Simulator for Endoscopic Sinus and Skull Base Surgeries. *J Craniofac Surg* 2020; **31**: 1811-1814 [PMID: 32310866 DOI: 10.1097/SCS.0000000000006395]

44 **Rosseau G**, Bailes J, del Maestro R, Cabral A, Choudhury N, Comas O, Debergue P, De Luca G, Hovdebo J, Jiang D, Laroche D, Neubauer A, Pazos V, Thibault F, Diraddo R. The development of a virtual simulator for training neurosurgeons to perform and perfect endoscopic endonasal transsphenoidal surgery. *Neurosurgery* 2013; **73 Suppl 1**: 85-93 [PMID: 24051889 DOI: 10.1227/NEU.0000000000000112]

45 **Varshney R**, Frenkiel S, Nguyen LH, Young M, Del Maestro R, Zeitouni A, Tewfik MA; National Research Council Canada. Development of the McGill simulator for endoscopic sinus surgery: a new high-fidelity virtual reality simulator for endoscopic sinus surgery. *Am J Rhinol Allergy* 2014; **28**: 330-334 [PMID: 25197920 DOI: 10.2500/ajra.2014.28.4046]

46 **Won TB**, Hwang P, Lim JH, Cho SW, Paek SH, Losorelli S, Vaisbuch Y, Chan S, Salisbury K, Blevins NH. Early experience with a patient-specific virtual surgical simulation for rehearsal of endoscopic skull-base surgery. *Int Forum Allergy Rhinol* 2018; **8**: 54-63 [PMID: 29105367 DOI: 10.1002/alr.22037]

47 **Boscoe EF**, Cabrera-Muffly C. Otolaryngology in the medical school curriculum: Current trends in the United States. *Laryngoscope* 2017; **127**: 346-348 [PMID: 27296300 DOI: 10.1002/lary.26099]

48 **Fung K**. Otolaryngology--head and neck surgery in undergraduate medical education: advances and innovations. *Laryngoscope* 2015; **125 Suppl 2**: S1-14 [PMID: 25124523 DOI: 10.1002/lary.24875]

49 **Ishman SL**, Stewart CM, Senser E, Stewart RW, Stanley J, Stierer KD, Benke JR, Kern DE. Qualitative synthesis and systematic review of otolaryngology in undergraduate medical education. *Laryngoscope* 2015; **125**: 2695-2708 [PMID: 25945425 DOI: 10.1002/lary.25350]

50 **Scott GM**, Best CAE, Micomonaco DC. Otolaryngology exposure in a longitudinal integrated clerkship setting. *J Otolaryngol Head Neck Surg* 2017; **46**: 51 [PMID: 28693609 DOI: 10.1186/s40463-017-0215-1]

51 **Kelly K**, Fung K, McLean L. Canadian Otolaryngology - Head and Neck Surgery clerkship curricula: evolving toward tomorrow's learners. *J Otolaryngol Head Neck Surg* 2013; **42**: 33 [PMID: 23663703 DOI: 10.1186/1916-0216-42-33]

52 **Pamarthi V**, Grimm L, Johnson K, Maxfield C. Hybrid Interactive and Didactic Teaching Format Improves Resident Retention and Attention Compared to Traditional Lectures. *Acad Radiol* 2019; **26**: 1269-1273 [PMID: 31085099 DOI: 10.1016/j.acra.2019.02.018]

53 **Sawatsky AP**, Berlacher K, Granieri R. Using an ACTIVE teaching format versus a standard lecture format for increasing resident interaction and knowledge achievement during noon conference: a prospective, controlled study. *BMC Med Educ* 2014; **14**: 129 [PMID: 24985781 DOI: 10.1186/1472-6920-14-129]

54 **Rozenberg A**, Dheer S, Nazarian LN, Long SS. Resident Perspectives of an Interactive Case Review Following Independent Didactic Study as a Method of Teaching a Pediatric Imaging Curriculum. *Curr Probl Diagn Radiol* 2017; **46**: 395-398 [PMID: 28262386 DOI: 10.1067/j.cpradiol.2017.01.003]

55 **Barnwell JC**, Halvorson JJ, Teasdall RD, Carroll EA. Finding Value in Surgical Didactics: Longitudinal Resident Feedback From Case-Based and Traditional Lectures in an Orthopaedic Residency. *J Surg Educ* 2017; **74**: 61-67 [PMID: 27663081 DOI: 10.1016/j.jsurg.2016.07.009]

56 **Fried MP**, Satava R, Weghorst S, Gallagher AG, Sasaki C, Ross D, Sinanan M, Uribe JI, Zeltsan M, Arora H, Cuellar H. Identifying and reducing errors with surgical simulation. *Qual Saf Health Care* 2004; **13 Suppl 1**: i19-i26 [PMID: 15465950 DOI: 10.1136/qhc.13.suppl\_1.i19]

57 **Koller SE**, Moore RF, Goldberg MB, Zhang J, Yu D, Conklin CB, Milner RE, Goldberg AJ. An Informed Consent Program Enhances Surgery Resident Education. *J Surg Educ* 2017; **74**: 906-913 [PMID: 28238705 DOI: 10.1016/j.jsurg.2017.02.002]

58 **Anderson TN**, Kaba A, Gros E, Schmiederer IS, Shi R, Aalami LR, Lin DT, Lau JN. A Novel Blended Curriculum for Communication of Informed Consent With Surgical Interns. *J Grad Med Educ* 2021; **13**: 411-416 [PMID: 34178267 DOI: 10.4300/JGME-D-20-01057.1]

59 **Yong V**, Zhao H, Gilmore K, Cripe J, Conklin C, Dauer E. Procedural-based Specialties Benefit from a Formal Informed Consent and Disclosures Educational Program. *J Surg Educ* 2022; **79**: 725-731 [PMID: 35000886 DOI: 10.1016/j.jsurg.2021.12.008]

60 **Thompson BM**, Sparks RA, Seavey J, Wallace MD, Irvan J, Raines AR, McClure H, Nihira MA, Lees JS. Informed consent training improves surgery resident performance in simulated encounters with standardized patients. *Am J Surg* 2015; **210**: 578-584 [PMID: 26072190 DOI: 10.1016/j.amjsurg.2014.12.044]

61 **Leeper-Majors K**, Veale JR, Westbrook TS, Reed K. The effect of standardized patient feedback in teaching surgical residents informed consent: results of a pilot study. *Curr Surg* 2003; **60**: 615-622 [PMID: 14972204 DOI: 10.1016/S0149-7944(03)00157-0]

62 **Jones JW**, McCullough LB. Consent for residents to perform surgery. *J Vasc Surg* 2002; **36**: 655-656 [PMID: 12218999 DOI: 10.1067/mva.2002.127430]

63 **Shanafelt TD**, Balch CM, Bechamps G, Russell T, Dyrbye L, Satele D, Collicott P, Novotny PJ, Sloan J, Freischlag J. Burnout and medical errors among American surgeons. *Ann Surg* 2010; **251**: 995-1000 [PMID: 19934755 DOI: 10.1097/SLA.0b013e3181bfdab3]

64 **Soh IY**, Money SR, Huber TS, Coleman DM, Sheahan MG, Morrissey NJ, Hallbeck MS, Meltzer AJ. Malpractice allegations against vascular surgeons: Prevalence, risk factors, and impact on surgeon wellness. *J Vasc Surg* 2022; **75**: 680-686 [PMID: 34478809 DOI: 10.1016/j.jvs.2021.07.233]

65 **Chen KY**, Yang CM, Lien CH, Chiou HY, Lin MR, Chang HR, Chiu WT. Burnout, job satisfaction, and medical malpractice among physicians. *Int J Med Sci* 2013; **10**: 1471-1478 [PMID: 24046520 DOI: 10.7150/ijms.6743]

66 **Bonnema RA**, Gosman GG, Arnold RM. Teaching error disclosure to residents: a curricular innovation and pilot study. *J Grad Med Educ* 2009; **1**: 114-118 [PMID: 21975717 DOI: 10.4300/01.01.0019]

67 **Hiyama T**. Otorhinolaryngology litigations in Japan. *Eur Arch Otorhinolaryngol* 2019; **276**: 2947-2951 [PMID: 31321501 DOI: 10.1007/s00405-019-05561-y]

68 **Voultsos P**, Oliva A, Grassi S, Palmiero D, Spagnolo AG. Are errors in otorhinolaryngology always a sign of medical malpractice? Review of the literature and new perspectives in the SARS-CoV-2 (COVID-19) era. *Acta Otorhinolaryngol Ital* 2020; **40**: 157-163 [PMID: 32519993 DOI: 10.14639/0392-100X-N0674]

69 **Mathew R**, Asimacopoulos E, Walker D, Gutierrez T, Valentine P, Pitkin L. Analysis of clinical negligence claims following tonsillectomy in England 1995 to 2010. *Ann Otol Rhinol Laryngol* 2012; **121**: 337-340 [PMID: 22724280 DOI: 10.1177/000348941212100509]

70 **Windfuhr JP**. [Faults and failure of tonsil surgery and other standard procedures in otorhinolaryngology]. *Laryngorhinootologie* 2013; **92 Suppl 1**: S33-S72 [PMID: 23625716 DOI: 10.1055/s-0032-1333253]

71 **Youssef A**, Ahmed S, Ibrahim AA, Daniel M, Abdelfattah HM, Morsi H. Traumatic cerebrospinal fluid leakage following septorhinoplasty. *Arch Plast Surg* 2018; **45**: 379-383 [PMID: 30037201 DOI: 10.5999/aps.2017.00913]

72 **Li H**, Dong S, Liao Z, Yao Y, Yuan S, Cui Y, Li G. Retrospective analysis of medical malpractice claims in tertiary hospitals of China: the view from patient safety. *BMJ Open* 2020; **10**: e034681 [PMID: 32973050 DOI: 10.1136/bmjopen-2019-034681]

**Footnotes**

**Institutional review board statement:** This study was exempted.

**Informed consent statement:** Patients were not required to give informed consent to the study because the analysis used anonymous clinical data that were obtained after each patient agreed to treatment by written consent.

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**Table 1 30-yr summary of litigation involving otolaryngology trainees (1990-2020)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Outcome** | **State** | **Plaintiff award ($)** | **Precipitating Medical Outcome** | **Allegations** | **Case summary** | **Case reference** |
| Plaintiff | MA | 32654 | Right sided hearing loss | 3, 4 | Pt underwent surgery for middle ear cholesteatoma. Resident/attending performed surgery. Stapes and oval window were violated | 1991; Jury Verdicts LEXIS 50361 |
| Plaintiff | PA | 12876069 | Vegetative state secondary to anoxic encephalopathy | 2, 3, 7 | Pt with goiter underwent surgery. Pt given pain meds post-op. Pt vomited and developed neck hematoma. Resident was unable to do a trach and waited for attending to complete it. While waiting, pt became comatose | 2012; Jury Verdicts LEXIS 5466 |
| Plaintiff | VA | 750000 | Permanent blindness in right eye secondary to retro-orbital hematoma | 5, 6 | Surgeon consented pt with CF to FESS to remove mucocele. Residents performed procedure and attending left OR. Ethmoid artery was severed; bleeding was stopped. Rebleed in post-op recovery causing a retro-orbital hematoma compressing the optic nerve | 2004; Dolan Media Jury Verdicts LEXIS 4472 |
| Plaintiff | VA | 2200000 | Bilateral recurrent laryngeal nerve injury and tracheostomy dependence | 3, 5, 7 | Pt underwent total thyroidectomy for PTC. Both recurrent laryngeal nerves were severed | 2019; Jury Verdicts LEXIS 104401 |
| Plaintiff | OH | 14460000 | Vegetative state secondary to anoxic encephalopathy | 3, 5, 6, 7 | Pt underwent surgery for deviated septum performed by resident. Pt was prematurely taken off ventilator resulting in cardiac arrest | 1997; OH Trial Rptr. LEXIS 1361 |
| Plaintiff | MI | 1003764 | Death secondary to airway obstruction | 2, 3 | Pt was intubated due to diabetic condition. Nasal packing was placed in both nostrils. During extubation, nasal packing went down pt's throat. Laryngoscope pushed packing deeper into trachea causing suffocation | 1995; Jury Verdicts LEXIS 60765 |
| Plaintiff | NY | 300000 | Facial nerve paralysis | 3, 4, 5 | Facial nerve severed by resident during mastoidectomy | 1993; Jury Verdicts LEXIS 54896 |
| Plaintiff | GA | 2350000 | Death secondary to traumatic vocal cord injury | 1, 2, 9 | Pt underwent lung wedge resection for nodule. Pt had episodes of aspiration. Nasopharyngoscopy showed significant glottal gap. Vocal cord injury was not recognized. Pt aspirated and died | 2020; Jury Verdicts LEXIS 318581 |
| Plaintiff | OH | 17050000 | Anoxic encephalopathy leading to spastic quadriparesis and mental retardation | 2 | Pt with bacterial tracheitis was admitted. Pt suffered temporary respiratory arrest. Pt treated with racemic epi but went into cardiac arrest. Pt was resuscitated but had brain injury with quadriparesis. Pt claimed defendants were negligent to order a bronchoscope and intubate to protect airway | 1992; Jury Verdicts LEXIS 50387 |
| Settlement | NY | 1100000 | Death secondary to malignancy | 2 | Pt presented with ear pain. Resident attributed pain to odontogenic origin. Oral surgeon removed teeth. Neurologist suspected trigeminal neuralgia. Neurosurgery then referred to ENT. MRI showed SCC. Missed cancer had spread, resulting in death | 2004; Jury Verdicts LEXIS 48892 |
| Settlement | NY | 5150000 | Anoxic encephalopathy; subglottic stenosis/tracheal stenosis due to prolonged intubation | 2, 9 | Pt had pulsatile mass noted on fiberoptic exam. CT revealed sphenoid mass, possible angiofibroma. Pt had heavy bleeding form nose with perforated carotid artery. Pt claimed resident never informed attending of pulsatile mass and did not act with urgency to embolize | 2004; Jury Verdicts LEXIS 47843 |
| Settlement | MI | 485000 | Vegetative state secondary to anoxic encephalopathy | 1 | Pt underwent surgery for cholesteatoma. CPAP was discontinued post-op. Continuous pulse ox was not monitored. Pt became non-responsiveness but breathing. Fellow ordered to recheck vitals in 30 min. Pt stopped breathing in 15 min | 2003; MI Trial Rptr. LEXIS 922 |
| Settlement | NY | 4700000 | Vegetative state secondary to anoxic encephalopathy | 1, 2 | Pt underwent elective thyroidectomy. Hypocalcemia was unnoticed in post-op. Pt went into respiratory failure and cardiac arrest. Resident opened surgical site, which revealed airway compromise due to post-thyroidectomy hematoma | 2008; Jury Verdicts LEXIS 31978 |
| Settlement | TX | 225000 | Death secondary to ARDS | 3, 7, 8 | Pt developed post-op ARDS secondary to aspiration following glottis-dilating surgery | 1995; Jury Verdicts LEXIS 72772 |
| Settlement | NY | 450000 | Spinal accessory nerve damage | 3, 4 | Pt underwent excisional biopsy of left cervical node. Pt developed winged scapula and inability to lift shoulder post-op | 1999; Jury Verdicts LEXIS 55907 |
| Defense | TN | 0 | Vegetative state secondary to anoxic encephalopathy | 3 | Pt scheduled for tracheotomy. CRNA paralyzed pt rather than sedating. Defendants were unable to secure airway for 6-8 min | 2000; TN Jury Verdicts & Sett. LEXIS 564 |
| Defense | LA | 0 | Permanent hearing deficit, facial pain and numbness | 2, 6, 9 | Pt c/o hearing loss. Resident diagnosed sinusitis rather than CN deficit failing to prescribe steroids. Pt was prescribed steroids 3 d later. Delay caused permanent hearing deficit and facial pain | 2019; LA JURY VERDICTS & SETT. LEXIS 247 |
| Defense | OH | 0 | Permanent lateral diplopia bilaterally | 3, 4, 5 | Pt underwent FESS complicated by a breach of lamina papyracea. Pt claimed possibility of vision compromise was not mentioned during consent, and resident should not have been on the case | 2003; OH Trial Rptr. LEXIS 1107 |
| Defense | MA | 0 | Injury to the face during rhinoplasty | 3, 6 | Negligent supervision of resident performing rhinoplasty resulting in retained foreign object from broken surgical instrument | 2010; Jury Verdicts LEXIS 93443 |
| Defense | CA | 0 | CSF leak, photophobia, and meningitis | 3, 5, 6, 7 | Pt underwent FESS complicated with a CSF leak. Photophobia and meningitis were noted post-op. Pt underwent subsequent surgeries. Defendants claimed pt had Munchausen’s syndrome | 1997; Jury Verdicts LEXIS 66164 |

Allegations: 1: Delay in evaluation; 2: Incorrect diagnosis or treatment; 3: Procedural error; 4: Improper informed consent of procedure; 5: Lack of knowledge of trainee involvement; 6: Failure to supervise trainee; 7: Inexperienced trainee; 8: Prolonged operation; 9: Trainee did not communicate or inform attending. Pt: Patient; Post-op: Post-operation; Trach: Tracheostomy; CF: Cystic fibrosis; FESS: Functional endoscopic sinus surgery; OR: Operating room; PTC: Papillary thyroid cancer; Epi: Epinephrine; ENT: Ear nose throat surgeon; MRI: Magnetic resonance imaging; SCC: Squamous cell carcinoma; CT: Computed tomography; CPAP: Continuous positive airway pressure; Pulse ox: Pulse oximetry; ARDS: Acute respiratory distress syndrome; CRNA: Certified registered nurse anesthetist; C/O: Complaining of; CN: Cranial nerve; CSF: Cerebrospinal fluid.

**Table 2 Allegations observed in 20 cases against otolaryngology trainees**

|  |  |
| --- | --- |
| Allegation | *n* (%) |
| Delay in evaluation | 3 (6.4) |
| Incorrect diagnosis or treatment | 8 (17.0) |
| Procedural error | 12 (25.5) |
| Improper informed consent of procedure | 4 (8.5) |
| Lack of knowledge of trainee involvement | 6 (12.8) |
| Failure to supervise resident | 5 (10.6) |
| Inexperienced trainee | 5 (10.6) |
| Prolonged operation | 1 (2.1) |
| Trainee did not communicate or inform attending | 3 (6.4) |
| Total | 47 (100) |

**Table 3 Adverse outcomes in 20 cases against otolaryngology trainees**

|  |  |
| --- | --- |
| **Outcome** | ***n* (%)** |
| Anoxic encephalopathy | 7 (35) |
| Death | 4 (20) |
| Hearing loss | 2 (10) |
| Vision loss | 2 (10) |
| Facial nerve injury | 2 (10) |
| Recurrent laryngeal nerve injury | 1 (5) |
| Cerebrospinal fluid leak | 1 (5) |
| Accessory nerve injury | 1 (5) |
| Total | 20 (100) |



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