ABSTRACT

OBJECTIVES: There is a paucity of data on resident experience in common otolaryngology procedures, such as ear debridement, nasal and laryngeal endoscopy, epistaxis control, and peritonsillar abscess drainage. Nevertheless, these procedures represent a critical aspect of training and are necessary skills in general otolaryngology. There is a debate about how to decide whether to dedicate emergency room (ER) time to these procedures. This study was to determine whether otolaryngology emergency room (ER) residents and supervising otolaryngology attending or fellow spend time during weekday hours. Each second year resident is assigned to a separate three-month rotation and is responsible for seeing patients between the hours of 6 AM and 7 PM. From 7 PM to 6 AM, one on-call senior resident evaluates patients in the ER.

METHODS: Diagnostic and procedural data for all patients evaluated in the Massachusetts Eye and Ear Infirmary (MEEI) otolaryngology emergency room (ER) were collected for the years 2011 and 2013.

RESULTS: A total of 12,234 patients were evaluated. A total of 5,673 patients (46.4%) underwent a procedure. Each second year resident performed over 400 procedures with the majority seen Monday through Friday. Results: The most common procedures included diagnostic nasolaryngoscopy (52.0%), ear debridement (34.4%), epistaxis control (7.0%), incision and drainage of lesions of the head and neck (1.7%), peritonsillar abscess drainage (1.7%), and removal of foreign body (0.8%).

CONCLUSIONS: An otolaryngology-specific emergency room (ER) provides junior residents with significant diagnostic and procedural volume in a concentrated period of time. This study demonstrates utility of an otolaryngology-specific ER curriculum for junior level residents.

INTRODUCTION

There is limited discussion in the literature on resident experience with minor procedures, such as ear debridement, nasal and laryngeal endoscopy, epistaxis control, and peritonsillar abscess drainage. Residents typically learn basic otolaryngologic procedures on a consult service or in specialty clinics during the early years of training.

An optimal teaching environment for essential otolaryngology-specific procedures has neither been identified nor well studied.

At the Massachusetts Eye and Ear Infirmary (MEEI), a dedicated otolaryngology emergency room (ER) is staffed by junior residents and supervising otolaryngology attending or fellow during weekday hours. Each second year resident is assigned to an equivalent of a two-month rotation and is responsible for seeing patients between the hours of 6 AM and 7 PM. From 7 PM to 6 AM, an on-call senior resident evaluates patients in the MEEI ER.

To examine a potential unique venue for procedural training, we aim to:

1) quantify junior resident experience in basic procedures in a dedicated otolaryngology ER, and
2) describe implications for ER-based otolaryngology training during residency.

METHODS AND MATERIALS

Electronic medical records of patients who registered for otolaryngologic care and received a diagnosis in the ER between January 2011 and September 2013 were extracted.

Procedures were grouped together into seven categories. These included nasolaryngoscopy (rigid and flexible), ear debridement, including cerumenectomy, epistaxis control, drainage of peritonsillar abscess, incision and drainage of lesion, removal of foreign body, and all other procedures.

Average annual procedural case volume per resident was calculated using 2011 and 2012 data. Cases included in these calculations were restricted to all patients arriving between 6 AM and 7 PM when only a single second year resident and supervising attending or fellow are present in the ER.

RESULTS

We identified 12,234 patient visits. A total of 5,673 patients (46.4%) underwent a procedure in the ER. Demographic characteristics are listed in Table 1. On average, each rotating junior resident performed 479 procedures per year (Table 2).

The five most common procedures were diagnostic nasolaryngoscopy (52.0%), ear debridement (34.4%), management of epistaxis (7.0%), irrigation and drainage of lesion (1.7%), drainage of peritonsillar abscess (1.7%) and non-operative removal of foreign body (0.8%) (Figure 1).

When stratified by type of procedure, control of pharyngeal bleeding, including management of post-tonsillectomy hemorrhage, was the only procedure that occurred more frequently during the evening hours (47.7% during the day). The majority of procedures occurred during the weekday (Monday to Friday).

CONCLUSIONS

An otolaryngology-specific emergency room provides junior residents with significant diagnostic and procedural experience early during residency. To our knowledge, this is the first quantitative assessment of emergency room-based diagnostic and procedural training in junior level otolaryngology residents. Duty-hour restrictions and increased pressure for clinical efficiency may limit adequate procedural training in specialty clinics or other consult services. There are numerous theoretical advantages to a dedicated otolaryngology emergency room educational model including assessment of the "undifferentiated" patient, ability to efficiently diagnose and treat a patient in a single visit and independently assess and triage patients.

REFERENCES


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