Otolaryngologic Manifestations and Referral Trends After Adult Traumatic Brain Injury

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BACKGROUND

TBI can cause persistent vestibular, auditory, sleep, and swallowing problems. Recent reviews describe substantial variation in post-TBI assessment and suggest symptoms may be missed without systematic screening.[1–3]

STUDY AIM

Characterize the frequency and timing of new otolaryngologic diagnoses after adult TBI and quantify subsequent OHNS and related-specialty referral within 1 year.

METHODS

Cohort: Retrospective cohort of adults ≥18 years with TBI identified using the **UCSF Health De-Identified Clinical Data Warehouse and UCSF DeID OMOP** (2015–2020; N = 3,311 | Mean age 44.5 ± 19.5 years).

Outcomes: New vestibular/balance, hearing, sleep apnea, and dysphagia diagnoses.

Referrals: Subsequent referrals to OHNS, audiology, sleep medicine, and vestibular rehabilitation/PT.

Analysis: Descriptive statistics summarized prevalence, timing, and referral patterns.

RESULTS

14.77%
489 of 3,311 adults

≈ 1 IN 6
developed ≥1 new OHNS diagnosis

FIGURE1: PREVALENCE BY DOMAIN:

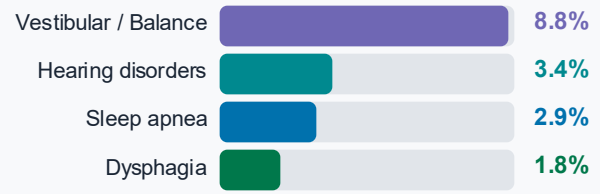
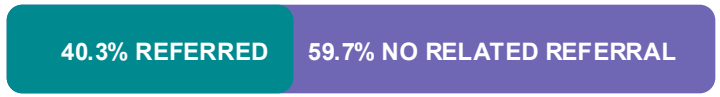


FIGURE2: FFITIMING OF DOCUMENTED CARE

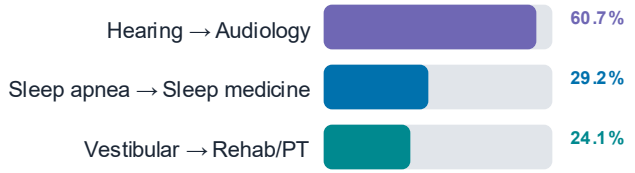


FIGURE 3: REFERRAL AFTER OHNS SEQUELA

ANY OHNS OR RELATED REFERRAL WITHIN 1 YEAR:



APPROPRIATE REFERRAL BY DOMAIN:



CORE FINDING: **Vestibular/balance disorders were most common, yet only 24.1% of affected patients were referred to vestibular rehabilitation/PT.**

CONCLUSIONS

- **OHNS sequelae were common after TBI**, affecting 14.77% of adults within 1 year, most often vestibular/balance and hearing disorders.
- **Observed prevalence was lower than in prospective studies using active surveillance**, suggesting possible under-recognition in routine clinical care.
- **Referral gaps were substantial:** nearly 60% of affected patients received no OHNS or related referral within 1 year.

WHY IT MATTERS

Observed prevalence was lower than in actively screened cohorts, suggesting possible under-recognition in routine clinical care.

CLINICAL IMPLICATION

Routine symptom screening after TBI and clearer domain-specific referral pathways may help identify patients who would benefit from OHNS, audiology, sleep medicine, or vestibular rehabilitation.

LIMITATIONS

Retrospective EHR design; reliance on documented diagnoses; single institution; referrals outside captured services may be missed.

REFERENCES

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