Otologic Outcomes After Blast Injury: A Retrospective Case Series Study

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Introduction

In recent years, there has been a rise in terrorist attacks utilizing high-energy explosive devices.

These explosions can cause significant injuries, and the ear is often a vulnerable target due to its exposed position.

Recognizing potential damage to the auditory system is crucial for planning optimal treatment and preventing long-term complications.

Aim of the Study

To evaluate the otologic outcomes after blast injuries, focusing on hearing impairment, tinnitus, and tympanic membrane perforation.

Materials and Methods

From 2015 to 2022, 13 patients were referred to our hospital following exposure to terrorist attacks.

Hearing impairment, tinnitus, and tonal audiometry of all patients were assessed. Otologic evaluation and treatment, including tympanoplasty results, were reviewed.

Results

A total of 13 patients (20 ears) with blast injuries from high-energy explosive devices were included in the study.

All patients were male with a mean age of 31 years. Hearing impairment was identified in 11 ears (55%), and tinnitus was present in 18 ears (90%).

Traumatic tympanic membrane perforation was observed in 11 ears (55%). By the end of the follow-up period, spontaneous healing of the eardrum perforation occurred in 9 ears (81.8%).

Two ears (18.2%) required tympanoplasty surgery. Sensorineural hearing loss was diagnosed in 11 ears (55%), and all patients received medical treatment.

Complete hearing recovery was achieved in 9 ears (81.8%).

Conclusion

Blast injuries from explosions pose a serious threat to auditory health.

Our findings emphasize the importance of early intervention and appropriate treatment to help prevent long-term hearing loss and other complications.

Additionally, collaboration between otolaryngologists and emergency departments is crucial to ensure proper triage and care for blast injury victims.