Miracle Still Happens: A Rare Case of Self-Inflicted Penetrating Injury of Ear

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Abstract Though foreign bodies of ear are quite commonly encountered in our day-to-day practice, self-inflicted penetrating injury of ear is not common. One such case of self-inflicted penetrating injury of ear with giant sized nail is presented here. In this patient the nail had traversed the whole thickness of skull and the pointed end of the nail could be traced at opposite temporal area. Extraction of the nail was posed with great difficulties as it was deeply impacted inside the dense bone of skull base. Miraculously, post-operative morbidity was very minimal in this case both in terms of intracranial tissue damage and hearing impairment.

Keywords Penetrating injury · Ear injury · Self-inflicted injury

Introduction

Incidences of self-introduction of foreign bodies in ear are quite common in children and to some extent in adults. But self-introduction of sharp pointed objects into one's ear is

probably the most unusual mode for committing suicide as we have come across in this case. For a normal person it is thought to be quite impossible to inflict such a giant sized nail into his skull beyond initial few thrusts. Of course, it is said that under intoxication people can perform tasks those are considered paranoid or even impossible under normal circumstances. Here we are presenting one such case, in which patient has not only succeeded to inflict a completely giant sized nail through his left ear, with persistent and successive thirst he was able to bring it out through opposite side of skull i.e. temple.

Before performing extraction in such case, one would always have to give due consideration to all possible intra-operative difficulties and postoperative outcome. Miraculously, post-operative morbidity was minimal in this case.

Case Report

A 35 years old male, tea garden worker was transferred to our ENT Department from district hospital with self inflicted penetrating nail into the head which has entered through his left ear. The incident happened at a remote tribal hamlet when most of his family members were away for worship. Under alcohol intoxication, all of a sudden he became angry due to some reason which he could not brief later on, took a large nail from neighborhoods and hammered the whole length into his skull through his left ear with repeated thrusts with the intention to commit suicide (Fig. 1).

On arrival at hospital, patient was found to be little drowsy but responding to verbal command. Only the head of the nail was visible at his left external auditory canal and the whole shaft being deeply impacted into his skull. The pointed tip of the nail could be palpable through skin over

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Fig. 1 Nail in side the ear with visible nail head

the opposite temporal area. There was some amount of blood clot inside the left EAC with mild facial paresis on the same side. There were also few bouts of convulsion, which persisted less than a minute. Urgent radiograph of skull was obtained, which confirmed the size and direction of the foreign body into the skull. On computerized tomography of the temporal bone the nail was seen to penetrate the ipsilateral temporal bone, skull base and contra lateral temporal lobe of brain and skull bone overlying it (Fig. 2). A large haematoma was localized under the scalp at the right temporal area.

Patient was taken to the operation theater after correcting his haemodynamic status. He received 2 U of blood transfusion preoperatively. Under general anesthesia, the nail was removed with a nail extractor by repeated gentle thrusts in reverse direction. The size of the nail was about 17 cm long, 1.5 cm in diameter at its base and round head of about 3 cm in diameter (Fig. 3). Following removal, there was gushing of blood through the external auditory meatus, which could be controlled by tight ribbon gauge

Fig. 3 Full view of the nail after removal

packing. His immediate postoperative period was uneventful except few bouts of convulsions for next 48 h. He was put on broad-spectrum antibiotics and anticonvulsive treatment.

Patient regained full level of consciousness by 3rd postoperative day. There was no reactionary or secondary hemorrhage or any sign of CSF otorrhoea. Postoperative otomicroscopy revealed granulation tissue in his EAC, which was cauterized electrically on 10th post-operative day.

The ruptured left tympanic membrane gradually healed up with granulations. His preoperative left sided facial palsy persisted and on hearing assessment he was found to have moderate degree of conductive hearing loss in his left ear. Both preoperative and postoperative repeated psychiatric evaluation did not reveal any major psychological disorder. He was discharged and allowed to go home on 12th postoperative day (Fig. 4). He was followed up for a period of about 6 months, but there was no notable sign of meningitis or any other neurological deficit.

Fig. 2 Pre-operative CT scan showing the nail

Fig. 4 Ready for returning home

Discussion

Foreign bodies of ear are quite a common occurrence in day-to-day practice of otolaryngologists, but such a gigantic foreign body is not probably been reported so far. Moreover, the injury was self-inflicted and attempting suicide in such a manner still remains to be seen.

Lasak et al. [1] retrospectively reviewed 44 cases of middle ear injuries. In 74% cases the injuries were penetrating in nature and among them only two cases developed dead ear. In 2001, Kim et al. described findings of penetrating injuries in children. Besides symptoms of hearing loss and vestibular disturbances there was perilymphatic fistula in all three cases of his series. Two patients, out of three suffered from SNHL [2]. Neuenschwander et al. [3] reported ataxia and vertigo in two such patients of penetrating injuries of middle ears in addition to other symptoms. Kojima et al. [4] reported similar findings in one of his 11 years old patient. Snelling et al. [5] found facial palsy in one the patient with similar injuries. In our patient injuries were much more complicated as it had traversed the whole left temporal bone and skull base to be finally lodged into opposite temporal lobe. As compared to the extensive nature of injuries, symptoms and disabilities were minimal in this patient. Though the patient suffered from few bouts of convulsions it never continued after recovery and patient had only moderate degree of conductive hearing loss in the affected ear. His left sided facial palsy was again minimal and incomplete.

Goldman et al. reported more dreaded complications like meningitis form otomastoiditis resulting from foreign body material in ear. Beside other symptoms; malodorous ear discharge and presence of granulation tissues are to be considered as warning signs [6]. Our patient did not develop such dreaded complication like meningitis or perilymph fistula. Adherence to the principle of gentleness on extraction and maintenance of strict aseptic condition was probably the key.

Conclusion

Attempting suicide by inflicting such a long metallic foreign body into one's own ear is probably the most uncommon modality. On such patients attempting a removal may not be quite difficult, but post-operative complications may be life threatening and devastating. Surprisingly postoperative complications and disabilities were much limited in this case as one would normally expect in such a case. Smooth and gentle extraction of such objects perhaps are better in many of the situations rather than some of the time-consuming skull base exposures. We consider that the act of infliction of such object into one's own ear is itself miraculous and of course, postoperative disabilities also were miraculously minimal in this case.

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