Round worm in the middle ear

Although round worm (Ascaris lumbricoides) infestation is quite common globally, it is more so in the developing countries especially in children from lower socio-economic strata. Round worm Infestation usually causes abdominal discomfort or colic. A heavy infestation can cause nutritional deprivation and at times intestinal obstruction. It can also produce symptoms because of abnormal migration of adult round worm. Two cases are being reported of abnormal migration of the round worm into the middle ear.

Case -1: A two and half year old child was brought to the emergency with the complaint of severe pain in the right ear. On clinical examination the only positive finding was an intense congestion of the tympanic membrane. A diagnosis of acute otitis media was made and the child was put on amoxicillin and ibuprofen. Next day the child was again brought to the ENT out-patient department as there was no relief of pain. Ear was again examined and this time a whitish worm-like organism was seen wriggling in the external auditory canal. On pulling out of the ear it was found to be an adult Ascaris. After removal of the worm the tympanic membrane was seen to be having central perforation. Child was given deworming agent and the antibiotic was continued. Pain subsided and the tympanic membrane healed in about 10 days.

Case -2: A 12 year old male child was admitted to the ENT ward with the history of discharge from the left ear associated with otalgia and hearing loss for the last 6 months. Examination of the left ear revealed the external auditory canal to be full of polypoidal granulation tissue; mastoid tenderness was also present. Patient was taken to the operation theatre for removal of the polypoidal mass from the ear canal to facilitate the drainage. While removing the polyp, a whitish worm was caught in the suction and pulled out. It was conflffffed to be an Ascaris. Patient was downed and put on antibiotic and was later taken up for mastoid exploration. During surgery mastoid segment was found to be full of granulation tissue. A cortical mastoidectomy was done, clearing out all the diseased tissue. Middle ear mucosa was found to be oedematous. Tympanic membrane perforation was repaired using a temporalis fascia graft.

Discussion
Ascaris infestation is quite common in this subcontinent. It causes numerous infrequent complications because of abnormal migration of the adult worm such as -blockage of the pancreatic duct and obstruction of the appendix. Adult worm can also be vomited out or at times it comes out through the nose causing great discomfort and distress to the patient. Migration of the adult round worm up the Eustachian tube into the middle ear is very rare but it has been documented. In children the Eustachian tube is shorter, wider and horizontal. So it may be possible for a migrating round worm to enter it. Ascaris in the middle ear can also cause mastoiditis, facial paralysis, suppurative labyrinthitis and even intracranial suppuration.

In the first case, migration of the round worm through the Eustachian tube into the middle year caused acute middle ear suppuration and ultimately causing breakdown of the tympanic membrane and movement of the worm into the external auditory canal. In the second case, there might have been preexisting chronic suppurrative otitis media. But the possibility of the round worm entering the middle ear cleft and causing suppuration leading to mastoiditis and exuberant granulation tissue formation cannot be ruled out.

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