

## Case Report

# Postauricular sinus: a case report

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### ABSTRACT

Post auricular sinus is a rare variant of the preauricular sinus in which sinus opening is located posterior to the tragus. Surgical excision of the sinus tract with its branches should be done in cases presenting with recurrent infections. There are 2 approaches unidirectional and bidirectional and the choice of approach depends on the preference of the surgeon. In our case right side post-auricular sinus was noted in a 35-year-old male which was surgically excised by unidirectional approach.

**Keywords:** Post auricular, Sinus, Tragus

### INTRODUCTION

One of the most common congenital otological disorders seen in ear, nose and throat (ENT) clinics is preauricular sinus. It was first reported by Heusinger in 1864.<sup>1,2</sup> It occurs due to abnormal union of the hillock of his in the process of prenatal auricle formation. The opening of the sinus is usually located anterior to the crus of helix and anterosuperior to the tragus. However, there is a rare variant of postauricular sinus where the sinus opening is located posterior to the tragus and near the crus of helix and the direction of this variant is from the opening towards the retroauricular area.<sup>3</sup> We are reporting one such rare case of right postauricular sinus.

### CASE REPORT

A 35-year-old man presented with recurrent episodes of discharge of pus from a small opening in the right ear pinna along with pain and swelling in the right retro auricular groove. There was no history of hearing loss or otorrhea. There was no family history of similar complaints. On examination there was a small opening in the center of the crus of the helix with pus. Swelling and erythema were noted in the retroauricular groove. External auditory canal and tympanic membrane were reported as normal on

otoscopic examination. Opposite side ear examination was within normal limit. Rest of the ENT and head and neck examination was within normal limit. A diagnosis of Infected right postauricular sinus was made based on the history and examination findings. He was initially treated conservatively with antibiotics and was asked to review periodically.

In the present follow up visit in our ENT outpatient department (OPD), patient was asymptomatic, no pus was noted in the sinus opening, rest of the pinna examination, retroauricular groove was normal (Figure 1). To prevent repeated infections in future patient was counselled for surgery. After doing PAC checkup patient was posted for surgery under general anaesthesia.

Probing of the sinus opening was done and methylene blue dye was injected to delineate the tract from the surrounding structures. An elliptical incision was given around the sinus opening, excision of the sinus tract with its branches was carefully done by following the flow of the dye along with excision of some amount of conchal cartilage and cuff of skin (Figure 2). Closure was done with sutures and pressure bandage was applied. Patient was discharged and stitches removed after 1 week. Patient has been followed up and no complications were reported.



**Figure 1: Preoperative picture.**



**Figure 2: Immediate postoperative picture in OT.**

## DISCUSSION

In the postauricular sinus the entrance of the sinus is located posterior to the tragus near the crus of helix. The pathogenesis is very similar to the pathogenesis of preauricular sinus.

The frequency of postauricular sinus reported in literature is very rare. Chang and Wu have reported 3 cases of postauricular sinus.<sup>4</sup> In Korea, Yeo et al have reported 8 cases of postauricular variant out of the 206 preauricular sinus patients.<sup>5</sup> A recent study in 2019 has shown report of 20 patients being detected from 2009 to 2013.<sup>6</sup> Halim et al have reported 1 case of postauricular sinus.<sup>7</sup> Kim et al have reported one case of bilateral postauricular sinus.<sup>2</sup>

Most of the patients with postauricular sinus are asymptomatic or have a history of recurrent infections.

Other history includes hearing or ear disorders in family, maternal history and history of renal disorder.<sup>8</sup>

Fistulography is a preoperative investigation which may be done to know the length and extent of the sinus.

Excision of the postauricular sinus is indicated in recurrent infection. The main aim of the excision is to ensure complete removal of the epithelial linings to avoid recurrence. Methylene blue, probe, and surgical microscope make it easier to find the tract and to remove the sinus completely.<sup>9,10</sup>

In postauricular sinus excision, there are 2 methods that were suggested in various articles reported in literature. The 2 methods are unidirectional and bidirectional. The methods applied depends on the variation of the sinus track and sac extensions and preference of the surgeon.<sup>5,6,11-15</sup> Unidirectional method is via exploring through the sinus pit. Bidirectional method excision is exploration through the sinus opening with another incision made via the retroauricular region.<sup>6,11-15</sup> In postauricular sinus, the sinus opening is located in the center of the crus of helix, or its surrounding; so, it has a depressed shape, and the sinus tract is either attached to the cartilage or penetrated. Therefore, the portion of auricle cartilage needs to be removed.

There are also other recommendations as an alternative of surgery, such as sinus tract destruction using sclerotherapy or electrodiathermy.

In our case unidirectional approach was followed to carefully remove the postauricular sinus and no complications noted.

## CONCLUSION

Complete surgical excision of the postauricular sinus tract and its branches should be done in case of recurrent infections.

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