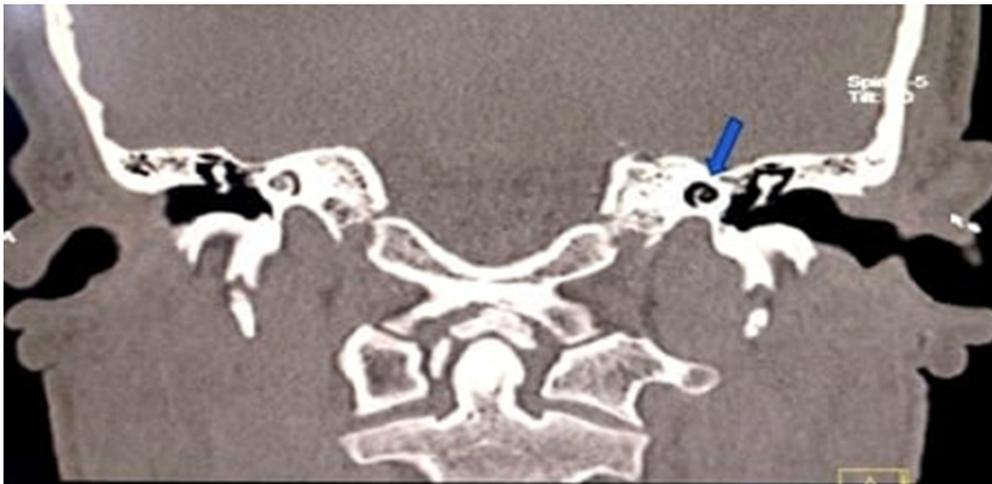


Clinical-Medical Image

## Rotatory Vertigo Revealing Post-Traumatic Combined Pneumolabyrinth: A Case Report

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**Figure 1:** Inframillimetric CT image of the temporal bone in coronal section showing a pneumocochlea in the left ear (blue arrow), contrasting with a normal appearance of the cochlea in the right ear.



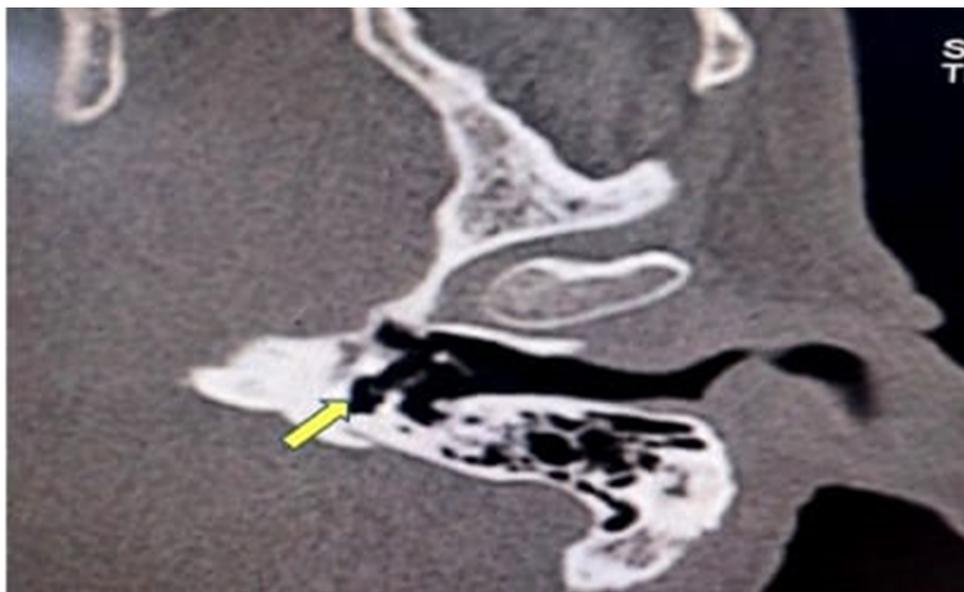
**Figure 2:** Inframillimetric CT image of the temporal bone in coronal section showing a vestibular PNL in the left ear (red arrow), contrasting with a normal appearance of the vestibule and the semicircular canals in the right ear.

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**Figure 3:** Inframillimetric CT image of the temporal bone in axial section showing the luxation of the stapes into the vestibule (Yellow arrow).

### Clinical-Medical Image

We report the case of a 45 year old patient with no medical or surgical history, presented to the consultation with hypoacusis associated with rotatory vertigo and tinnitus, consecutive to a trauma by a cotton-tipped swab. The otological examination revealed a tympanic perforation. a CT scan of temporal bone in which joined 0.6 mm thick sections in the axial and coronal planes were performed, showed pneumatization of the vestibule, semicircular canals and the cochlea in the left ear (Figures 1 and 2), with intravestibular luxation of the plate and slight stapedial depression (Figure 3), suggesting a labyrinthic fistula. No bone fracture was found. The diagnosis of a pneumolabyrinth secondary to a stapedo-vestibular luxation was therefore retained. Pneumolabyrinth (PNL) is defined as the presence of air within the inner ear causing cochleovestibular signs and symptoms [1]. It can occur at any age and it is most commonly found in male patients. It can be the consequence of various etiologies., but the vast majority are post-traumatic [2]. It is diagnosed by the presence of air within the inner ear on radiological imaging. The patient may present with cochleovestibular signs including sensorineural hearing loss, tinnitus, aural fullness, dizziness and vertigo [1]. A PNL is classified as combined when it affects the vestibular organs and the cochlea, as in our case, otherwise it can be classified as vestibular PNL, or as a cochlear PNL [2]. Traumatic luxation of the stapes into the vestibule still a rare complication in penetrating middle ear injury [3]. Due to the limited number of cases, there is no established consensus for the management of pneumolabyrinth. Conservative treatment (bed rest, antibiotics, corticosteroids) can be attempted, but exploratory tympanotomy is advisable in case of rapidly progressive hearing loss and/ or persistent vertigo or persistent disabling vestibular impairment [2].

**Keywords:** Pneumolabyrinth; Vertigo; Post-traumatic

### Conflict of Interest

None of the authors has any conflicts of interests to disclose.

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