IMAGE IN OTORHINOLARYNGOLOGY

Discharging mastoid cavity caused by necrosis of the modiolus

Supuración de cavidad mastoidea por necrosis del modiolo

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A 68-year-old man was admitted to our hospital with meningitis and labyrinthine fistula as complications of a chronic otitis media with cholesteatoma on the left ear. In addition to the intensive medical treatment of the meningitis, a canal wall down procedure was performed. Cholesteatoma invading the membranous labyrinth was removed and a large fistula of the vestibule, superior and external semicircular canals was closed with bone pate and temporal muscle covered by fascia temporalis. The patient was discharged after 25 days.

On follow-up, the patient developed a persistent discharging mastoid cavity that was maintained by several months despite maximal medical treatment. Residual intralabyrinthine disease was suspected. On investigation, computed tomography and magnetic resonance with diffusion-weighted imaging were performed but cholesteatoma was not identified. Persistence of otorrhea determined revision surgery. Intraoperatively, osteitis and osseous necrosis of the modiolus (white arrow in figures) were found (Fig. 1) and the necrotic and infected bone was removed (Fig. 2; GG – geniculate ganglion; dashed line

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- facial ridge) before the fistula was repaired. The only finding to which we could attribute the failure of primary surgery was the bone sequestrum corresponding to the modiolus. Histopathologic examination confirmed necrotic and infected bone.

After surgery, otorrhea subsided and the mastoid cavity healed properly. Careful review of the preoperative computed tomography (axial section in Fig. 3) confirmed the low-density of the modiolar part of the cochlea, not previously recognized, which is a sign for osteitis.

Figure 3