



Internal Medicine Flashcard

Ear pain, vesicles and facial palsy

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Case presentation - A 35-year-old previously healthy man presented to the emergency department with a left-sided facial palsy (Fig 1. Panel A). Four days before, he complained of left ear pain with hearing loss and tinnitus and received antibiotics for a presumed infection. He then developed voice impairment and inability to swallow properly. On examination, his left ear was erythematous and vesicles were seen both in the auricle and in the external auditory canal (Fig. 1. Panel B), without any lesion in the oral cavity. There was no fever or neck stiffness. Lumbar puncture revealed meningitis with pleiocytosis (mostly lymphocytes), normal glucose and protein levels and negative Gram stain. Human Immunodeficiency Virus test was negative.

1. What is the diagnosis ?

Diagnosis - Ramsay Hunt syndrome is a rare otologic complication resulting from varicella zoster virus (VZV) reactivation in the geniculate ganglion of the facial nerve [1]. Diagnosis is made primarily on the classical triad of prodromal ear pain, vesicles and ipsilateral facial palsy. After primary infection (chicken pox), the virus is believed to reach the geniculate ganglion through the sensory branches of the facial nerve located on the ear and tongue and to remain latent in ganglionic neurons. VZV reactivation usually affects facial nerve, leading to Ramsay Hunt syndrome, and occasionally extends to vestibulocochlear nerve (anatomical proximity within the internal auditory canal); rarely, further cranial nerves may be invaded, as a result of simultaneous viral

reactivation in several ganglia or direct spread along hematogenous, cerebrospinal fluid or perineural anastomotic pathways [2]. Our patient developed cranial polyneuropathy, with involvement of left-sided cranial nerves VII (facial palsy), VIII (hearing loss and tinnitus), IX and X (dysphagia and voice impairment). Polymerase chain reaction testing was positive for VZV in cerebrospinal fluid. There are few data to guide treatment decisions, although favorable outcomes have been found with early combination of antiviral and corticosteroids, along with artificial tears, eye patch and facial exercises [3]. At his one month follow-up visit our patient showed poor improvement in facial palsy, remaining tinnitus and complete recovery of cranial nerves IX and X, and did not complain of post-herpetic neuralgia.

CRediT authorship contribution statement

Edouard Flamarion: Writing - original draft. **Justine Zini:** Writing - original draft. **Amélie Passeron:** Writing - original draft.

Declaration of Competing Interest

None of the authors of this paper has a financial or personal relationship with other people or organizations that could inappropriately influence or bias the content of the paper. It is to specifically state that there is “No Conflict of Interest” with other people or organizations that could inappropriately influence or bias the content of the paper.

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Fig. 1. Panel A: Patient was instructed to close both eyes (unable to do on left side) and to smile (unable to do it uniformly); Panel B: Left painful ear with erythema and vesicles in the auricle and in the external auditory canal.

References

- [1] Hunt JR. On herpetic inflammations of the geniculate ganglion. a new syndrome and its complications. *J Nerve Ment Dis* 1907;34:73–96.
- [2] Kim YH, Chang MY, Jung HH, Park YS, Lee SH, Lee JH, et al. Prognosis of ramsay hunt syndrome presenting as cranial polyneuropathy. *Laryngoscope* 2010;120:2270–6.
- [3] Monsanto R, Bittencourt A, Bobato Neto N, Beilke S, Lorenzetti F, Salomone R. Treatment and prognosis of facial palsy on ramsay hunt syndrome: results based on a review of the literature. *Int Arch Otorhinolaryngol* 2016;20:394–400.