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Case Report

Ramsay Hunt Syndrome – Case Report

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Abstract: Ramsay Hunt Syndrome (RHS) results from the reactivation of the varicella-zoster virus (VZV). Its incidence is approximately 5 per 100,000 people per year. The clinical presentation is variable, with the most common manifestation being ipsilateral facial paralysis, otalgia, and vesicular rash. Several factors increase the risk of herpes zoster and, consequently, the incidence of RHS. A 60-year-old woman presented with left-sided peripheral facial paralysis, otalgia, and vesicles on the ipsilateral auricle and external auditory canal. Laboratory tests and cranioencephalic computed tomography showed no significant acute changes. She was diagnosed with RHS and treated accordingly, subsequently showing a favorable evolution. Studies to date demonstrate the benefit of combined antiviral and corticosteroid therapy. Early treatment initiation, within the first 72 hours, is associated with a better prognosis and minimizes the risk of permanent neurological damage.

Keywords: Ramsay Hunt; Herpes Zoster; Facial Paralysis; Otalgia; Case Report.

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1. Introduction

First described in 1907 by James Ramsay Hunt, an American physician, Ramsay Hunt Syndrome (RHS) is caused by the reactivation of latent varicella-zoster virus (VZV) in the geniculate ganglion, leading to inflammation, edema, and compression of the facial nerve [1,2]. Less than 1% of herpes zoster cases involve the facial nerve and result in RHS [2]. It affects both immunocompetent and immunocompromised patients, with an incidence of approximately 5 per 100,000 people per year, accounting for 12% of all peripheral facial paralysis cases [1, 3]. Women are about 20% more affected than men [1]. Cases have been reported in patients aged 3 months to 82 years, although those in their 7th and 8th decades of life are more susceptible [2, 5]. Factors increasing the risk of herpes zoster subsequently raise the incidence of RHS, including stress, chemotherapy, immunosuppression, infections, and malnutrition, among others [2].

The clinical presentation is highly variable. The classic triad includes ipsilateral facial paralysis, otalgia, and vesicular rash, but other symptoms such as altered taste, dry eye, tearing, hearing changes, tinnitus, vertigo, and more may also be present [2, 7]. This case is particularly relevant as it highlights the importance of early diagnosis and treatment of an uncommon pathology.

2. Case Report

We present the case of a 60-year-old Caucasian woman, independent in daily activities, with no relevant medical history and not on regular medication. She visited the emergency department with complaints of left-sided otalgia, vertigo, and right-sided deviation of the labial commissure, which had evolved over approximately five days. She had previously been seen by her primary care physician three days earlier for the same symptoms,

but without facial asymmetry. Otoscopy findings were not documented, and she was empirically prescribed ciprofloxacin 500 mg every 12 hours for presumed external otitis and betahistine 16 mg every 8 hours, without clinical improvement.

At the clinical evaluation, she was afebrile, with blood pressure 136/81 mmHg, heart rate 83 bpm, blood glucose 140 mg/dL, and peripheral oxygen saturation of 97% in room air. Examination revealed left-sided peripheral facial paralysis—facial asymmetry with palpebral ptosis, rightward deviation of the labial commissure, and loss of facial expression lines. No other neurological deficits were observed, including language, muscle strength, or motor coordination deficits. Numerous erythematous vesicles with mild perilesional edema were noted on the ipsilateral auricle and external auditory canal.

Laboratory tests showed no significant changes, with no elevation in inflammatory markers (leukocytes 6.46 x 10^9/L; C-reactive protein 0.10 mg/dL). Specific viral serology for VZV was not performed due to the unavailability of these tests in the emergency service. Cranioencephalic computed tomography showed no significant acute changes.

The patient was diagnosed with RHS. The presence of auricular vesicles and peripheral facial paralysis associated with VZV-like symptoms excluded Bell's palsy and bacterial external otitis. Despite the symptom duration exceeding three days and the lack of consensus on antiviral and corticosteroid use in this syndrome, the medical team prescribed prednisone 60 mg (1 mg/kg) and valacyclovir 3000 mg/day divided into three doses to improve prognosis and minimize the risk of permanent neurological damage. The patient was referred for motor rehabilitation therapy and subsequently reevaluated after three months. She showed favorable evolution, with complete recovery of facial deficits after about one month from symptom onset, no sequelae, and no post-herpetic neuralgia up to that point.

3. Discussion and Conclusion

The diagnosis of RHS is clinical and may be challenging in the absence of vesicular eruptions. Laboratory tests to confirm the presence of VZV are often impractical and have low sensitivity. The virus can be isolated from vesicular fluid, blood, saliva, or tears. Polymerase chain reaction (PCR) assays have a sensitivity of approximately 58% for this virus. Enzyme-linked immunosorbent assays (ELISAs) have sensitivities of 82–99%; however, their utility in the acute setting is limited since anti-VZV antibodies take weeks to develop. Magnetic resonance imaging (MRI) often shows inflammation near the geniculate ganglion of the affected facial nerve, but computed tomography (CT) scans typically do not contribute to the diagnosis and are not necessary. When the cause of facial paralysis is not clinically clear, imaging and serological studies can be useful; however, most RHS cases are diagnosed through a thorough clinical history and physical examination [2]. The recovery from RHS is inversely proportional to the severity of nerve damage. The more severe the nerve damage, the longer the recovery time and the lower the likelihood of returning to normal function.

Herpes zoster is typically self-limiting. However, the primary goal of treatment is to reduce late complications, particularly spastic paralysis and post-herpetic neuralgia [2]. Several studies have shown a significant reduction in long-term complications with the use of antivirals and oral corticosteroids, as they prevent nerve degeneration and improve recovery rates. It is unclear, however, whether this therapy reduces the duration or severity of acute symptoms. Regarding antiviral use, no evidence has yet shown its efficacy in RHS as it does for herpes zoster infections in other body parts [8].

Despite the lack of randomized controlled trials, data from case reports and retrospective studies suggest that combined treatment with corticosteroids and antivirals, when initiated early, improves prognosis and minimizes the risk of permanent neurological damage. Medically refractory RHS may require surgical decompression [2,4,6].

According to a study by Kinishi, combined therapy initiated within the first 72 hours after disease onset was associated with better outcomes, with recovery in up to 75% of

patients. Conversely, corticosteroid-only treatment in 47 patients significantly reduced recovery rates to 53%. Although the likelihood of full recovery decreases if therapy is delayed beyond three days, studies still show some benefit from treatment initiation [4, 6, 9].

This case report highlights a rare condition that can be encountered in primary care, where its diagnosis is often overlooked or delayed. Knowledge of RHS can enable early diagnosis, timely therapeutic intervention, and improved prognosis.

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References

1. Patidar M, Singh G, Subhalakshmi V, Balasubramanian S, Ealla KR. Ramsay Hunt syndrome: A diagnostic challenge for general dental practitioners. Contemp Clin Dent. 2017;8(2):337. https://doi.org/10.4103/ccd.ccd_1099_16.
2. Crouch AE, Hohman MH, Moody MP, Andaloro C. Ramsay Hunt Syndrome. PubMed; StatPearls Publishing. 2023. Available from: https://www.ncbi.nlm.nih.gov/books/NBK557409/.
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(4):394–400. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5063726/pdf/10-1055-s-0036-1584267.pdf.
4. Kumar Ghezta N, Bhardwaj Y, Ram R, Basi R. Ramsay Hunt Syndrome: A diagnostic dilemma. Natl J Maxillofac Surg. 2022;13(Suppl 1):S179–82. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9651248/pdf/NJMS-13-179.pdf
5. Jeon Y, Lee H. Ramsay Hunt syndrome. J Dent Anesth Pain Med. 2018;18(6):333. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6323042/?report=reader.
6. Sweeney CJ, Gilden DH. Ramsay Hunt syndrome. J Neurol Neurosurg Psychiatry. 2001;71(2):149–154. Available from: https://jnnp.bmj.com/content/jnnp/71/2/149.full.pdf.
7. Cascais Costa J, Pereira C. Ramsay Hunt syndrome: An uncommon presentation in an immunocompetent patient. Galicia Clínica. 2018;79(1):30. https://doi.org/10.22546/47/1289.
8. Kim SJ, Lee HY. Acute peripheral facial palsy: Recent guidelines and a systematic review of the literature. J Korean Med Sci. 2020;35(30):e245. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402921/.
9. Goswami Y, Gaurkar SS. Ramsay Hunt Syndrome: An introduction, signs and symptoms, and treatment. Cureus. 2023. Available from: https://doi.org/10.7759/cureus.33688.