Thunderclap headache, otoneurological symptoms and dysgeusia as atypical clinical manifestations of Guillain-Barrè- Strohl syndrome: a case report.

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INTRODUCTION AND AIMS

Guillain-Barrè-Strohl syndrome (GBS) is an acute autoimmune polyradiculoneuropathy typically characterized by progressive, ascending muscle weakness, Hyporeflexia and bulbar involvement.(1)

This case aims to underline the diagnostic challenges associated with non-classical features of the disease.(2)

CASE PRESENTATION

A 47-year-old previously healthy woman was admitted to emergency department of Policlinico Tor Vergata in April 2025 for acute onset of thunderclap headache, bilateral sensorineural hearing loss, tinnitus, dysgeusia, and paresthesia involving the face and all four limbs with no motor symptoms. She disclaimed any prior gastrointestinal or respiratory symptoms or infections. Neurological examination revealed **areflexia, hypopallesthesia, bilateral hypoacusia and distal sensory deficit in all four limbs**. Brain and cervico-dorsal Contrast-enhanced MRI (Figure1,2,3) showed no significant abnormalities. Blood tests, including serum antiganglioside antibodies, autoimmune panels, virological and bacteriological screening, were normal. A lumbar puncture was performed and cytomorphological analysis of the cerebrospinal fluid revealed no albumin cytological dissociation, and the virological screening yielded negative results. Nerve conduction studies(Figure 4) demonstrated demyelinating polyradiculoneuropathy. Audiometric evaluation confirmed a sensorineural hearing loss in the frequency range of 3000 to 6000 Hz. (BAEPs) of the left ear showed absence of the first wave (Figure 5). A total-body computed tomography (CT) scan was performed to rule out neoplastic causes, with no evidence of malignancy found. Despite the absence of CSF abnormalities and negative serology, the clinical presentation and neurophysiological findings supported a diagnosis of GBS. Therefore, treatment with intravenous immunoglobulin (IVIG) was promptly administered at a dose of 0.4 g/kg/day over five days and the patient gradually improved. She was discharged in stable condition and enrolled in outpatient neurological follow-up.

Figure 1: Admission MRI scan (STIR sequence)

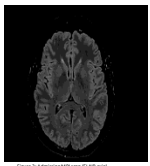

Figure 2: Admission MRI scan (FLAIR axial sequence)

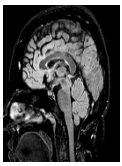

Figure 3: Admission MRI scan (FLAIR sagittal sequence)

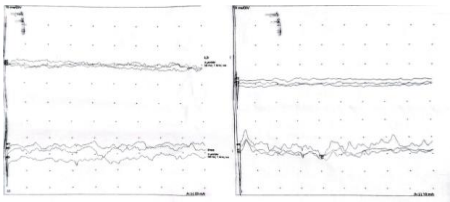

Figure 4: SEP LL

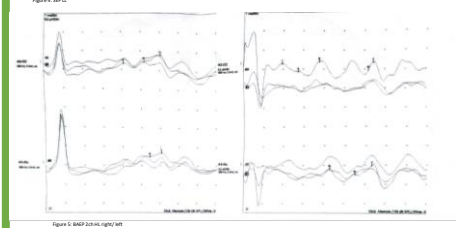

Figure 5: BAEP 2ch HL right/ left

DISCUSSION AND CONCLUSION

This case demonstrates that GBS can present with **uncommon symptoms** (3) such as **headache, auditory disturbances and dysgeusia**, which may precede or mask classical signs. The absence of CSF albumin cytologic dissociation and antiganglioside antibodies can further delay diagnosis. In such cases, **neurophysiological studies play a key role** in supporting the diagnosis. A broad differential mimics infectious, autoimmune, and paraneoplastic must be excluded. This case underlines the importance of maintaining a high index of suspicion for GBS even in the absence of typical diagnostic hallmarks and highlights the need for early therapeutic intervention to achieve favorable outcomes.

references

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