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Research article on Bilateral facial palsy in a young women

KEYWORDS: Guillain-Barré Syndrome, facial palsy.

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ABSTRACT *Bilateral paralysis of the facial nerve is a relatively rare presentation and often indicates a serious underlying medical condition. Guillain-Barré syndrome needs to be considered, among others in the differential diagnoses of such presentation. We present here the case of a 25 year old female who presented with bilateral facial nerve paralysis due to the Guillain-Barrésyndrome.*

Introduction

Unilateral facial paralysis is a common clinical entity. Majority of these cases are due to idiopathic or Bell's palsy. Bilateral facial paralysis, unlike its unilateral counterpart is an extremely rare presentation. An aetiological factor is often demonstrable [1]. Majority of these cases are due to serious underlying medical conditions and may need emergency medical treatment. Common causes for bilateral facial palsy include Lyme disease, Guillain-Barre syndrome, Leukaemia, Sarcoidosis, Infectious Mononucleosis and trauma. Only 20% of these cases are due to Idiopathic or Bell's palsy where no evidence of systemic or local disease can be found [2]. We present a case report of bilateral facial paralysis due to Guillain-Barré syndrome which has been successfully managed.

Case presentation

A 25 year old female presented with one day history of left sided facial weakness. she gave history of 'pins and needles' on both hands and feet . there was no history of trauma, rashes, travel abroad or exposure to tick bites. There was no other significant past medical history and she was not on regular medications. The patient was a non-smoker and did not consume alcohol. An otolaryngological examination was unremarkable but for complete bilateral lower motor neuron type of facial palsy (House &Brackman Grade III). All other cranial nerves were intact and there was no evidence of sensory deficits elsewhere. Lower limb power was 4/5 across all muscle groups, while power in the upper limbs was normal. By the tenth day, she developed loss of ankle reflexes bilaterally. . Plantar reflexes was equivocal. There was no bladder or bowel involvement .Fundoscopy was normal.

Blood tests for full blood counts, urea and electrolytes, serum angiotensin converting enzyme (ACE) and the vasculitic screen were within normal limits. Blood culture was negative. ESR was 20 mm/1st hr. Chest radiograph was clear. Pure tone audiometry revealed normal hearing thresholds on both sides and Tympanometry showed normal middle ear mechanism on both sides. Magnetic Resonance Imaging scan of the head was normal.

Nerve conduction studies showed demyelinated motor sensory radiculoneuropathy in lower limbs greater than upperlimbs suggestive of an early Acute Inflammatory Demyelinating Polyneuropathy (AIDP). Lumbar puncture was then performed revealing an albumin-cytological dissociation (CSF protein of 72mg/dL and a white cell count of three). CSF glucose was 81mg/dl(plasma glucose 107mg/dl). With the characteristic protein-cell count differentiation, a diagnosis of the Guillain-Barre Syndrome (Acute Inflammatory Demyelinating Polyneuropathy) was made. Anti-Nuclear antibodies (ANA), and Anti-Double Stranded DNA (Anti dsDNA) studies were also negative.

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Discussion

Bilateral facial nerve palsy has an incidence of only 1 per 5 million populations per year [3] It may be the presenting feature of a potentially life threatening illness, hence care must be taken to exclude potential metabolic, infectious, vasculitic, traumatic [1], immunological (eg. multiple sclerosis) and neoplastic causes before diagnosing a bilateral Idiopathic or Bell's palsy [4} Lyme's disease is a common cause of facial palsy in endemic areas but our patient had no history of exposure to ticks or recent travel abroad. There was no evidence of erythema chronicummigrans or the characteristic rash. In view of her age and atypical findings, she was investigated for multiple sclerosis, but the magnetic resonance imaging of the head was normal and cerebrospinal fluid analysis was negative for oligoclonal bands. Herpes viruses and infectious mononucleosis may also affect the facial nerve but the screen for herpes simplex and varicellazoster viruses were negative. Sarcoidosis [5], systemic lupus erythrematosus (SLE) [6] and PolyarteritisNodosa (PAN) are other diseases associated with facial diplegia, but with a low ESR and a negative auto-antibody screen they were considered less probable. The patient's presentation and normal MR brain imaging made CNS leukaemia, lymphoma and benign intracranial hypertension unlikely. Other causes listed in the literature include amyloidosis, syphilis, poliomyelitis, tuberculosis and porphyria [7] but in view of their rarity in our patient's circumstances these possibilities were not explored further. Wegener's granulomatosis involving middle ears on both sides causing bilateral facial paralysis has also been reported [8]. Guillain-Barré syndrome, also known as an Acute Inflammatory Demyelinating Polyneuropathy (AIDP) is an acute demyelinating polyradiculopathy of uncertain aetiology which may present with facial nerve involvement in 27–50% of cases, often bilaterally [9]. In many cases other cranial nerves may also be involved, with the possibilities of coexistent dysphagia and dysarthria. A history of a preceding viral infection is seen in most cases. Facial palsy usually follows limb weakness [10]. Our patient presented rather unusually in that her facial nerve paralysis preceded any significant areflexia in the peripheral limbs, the so called 'descending variant' and loss was restricted to the ankle reflexes. Diagnosis was made by cerebrospinal fluid analysis revealing a raised protein content in the absence of an increased cell count. Presenting features are variable and may include significant respiratory muscle paralysis, in which case invasive ventilation may be needed. Hence, early and regular pulmonary function assessments are recommended in all cases.

Treatment is usually supportive, with immunoglobulin infusions or plasmapheresis in appropriate cases. Prognosis is generally good with the above measures [9]. Conclusion Simultaneous presentation of bilateral facial palsy is very uncommon. The differential diagnosis of these should include Acute Inflammatory Demyelinating Polyneuropathy (Guillain-Barré syndrome). Raised protein content in the absence of increased cell count at CSF analysis confirms the clinical diagnosis. Management may include ventilatory support, immunoglobulin infusion or plasmapheresis. The prognosis is good in the majority of treated cases.

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