CASE REPORT

Bilateral facial palsy in Hansen’s disease

ARUN C. INAMADAR & APARNA PALIT
Department of Dermatology, Venereology & Leprology,
BLDEA’s SBMP Medical College, Hospital & Research Centre,
Bijapur, Karnataka, India

Accepted for publication 9 August 2003

Introduction

Bilateral lower motor neuron (LMN) facial nerve paralysis is a rare phenomenon. It can be seen in association with brain stem encephalitis, basal meningitis, acute inflammatory polyradiculoneuropathy, Heerfordt’s syndrome, leukaemic infiltration and osteopetrosis. Leprosy, one of the most important causes of peripheral neuropathy in endemic countries, can give rise to partial bilateral facial nerve paralysis. When the nerves supplying the extraocular muscles are involved, it causes bilateral lagophthalmos and the quality of life of the affected person is greatly impaired. Here, two such cases are described.

Patient 1

A 35-year-old male agricultural worker presented with a painful erythematous shiny plaque lesion over the central face, and an inability to close both eyes for the previous 2 days. On questioning, he admitted the presence of hypopigmented patches over his face and right side of his neck for some time, for which he did not seek medical advice. On examination, there was a large, erythematous, oedematous shiny plaque lesion of about 12 × 10 cm on the mid-face, involving the upper lip, both cheeks, nose, eyelids and lower part of the forehead. A similar lesion was seen extending from the front of the right pinna to the retroauricular area and right side of the neck. There were no other lesions on his body. On attempting gentle eye closure, the eyelids did not approximate and there was a bilateral Bell’s phenomenon (Figure 1). Both supraorbital and infraorbital nerves, the zygomatic branches of the facial nerves, and the right greater auricular nerves were enlarged and tender. A skin biopsy from the edge of the lesion on forehead showed changes suggestive of BT leprosy. A slit skin smear from both ear lobules and the lesion on the face were positive with a BI of 1+. The patient was given MDT along with prednisolone. The skin reaction gradually subsided but the patient...
was left with lagophthalmos (Figure 2). The prednisolone was tapered gradually and eye care and physiotherapy were advised.

**Patient 2**

A 23-year-old male labourer presented to the ophthalmology outpatient department for sudden onset of inability to close both eyes and epiphora of 3 days duration. He was a diagnosed case of BT leprosy, and had been receiving MDT for the past 2 months. On examination, there were two erythematous, shiny, tender plaque lesions, each of about

![Figure 2. Persistent bilateral lagophthalmos with visible Bell’s phenomenon.](image)
7 × 5.5 cm, involving both cheeks. A similar lesion on the right elbow region, with a right ulnar claw hand deformity, was recorded. Zygomatic branches of both facial nerves and right ulnar nerves were thickened and tender. He was unable to close his eyes effectively and exhibited bilateral Bell’s phenomenon. The MDT was continued with the addition of prednisolone in gradually tapering doses. Subsequently physiotherapy was advised for the persistent deformities of the eyes and right hand.

Discussion

The zygomatic branch of the facial nerve crosses the zygomatic bone and adjacent part of the maxilla to supply the lower part of orbicularis oculi muscle. In this location, it is easily involved if an overlying lesion of leprosy undergoes a Type I reaction. This gives rise to eversion of the lower eyelid, epiphora and a visible Bell’s phenomenon demonstrable on gentle closure of eyes.

Unlike other causes of bilateral LMN type of facial paralysis, leprosy involves individual terminal branches of the facial nerve. These give rise to partial clinical features in the form of bilateral lagophthalmos but the lines of facial expression are preserved. Though reported rarely, in endemic countries leprosy should be considered as an important cause of bilateral LMN facial paralysis. The action of the upper part of orbicularis oculi, which is supplied mostly by temporal branch of facial nerve, is preserved in such cases. Thus a forceful attempt of eye closure conceals the Bell’s phenomenon, and a subtle deformity is masked. This fact should be kept in mind while evaluating the functional integrity of the facial nerve in a leprosy patient with lesions on the face.

Lagophthalmos may persist after MDT and corticosteroid treatment and is both stigmatizing and threatening to sight. It is very important that the sufferer is properly taught the principles of regular self-care, and may be considered for reconstructive surgery.

References