Bell’s sign with lagophthalmos in leprosy

A 35-year-old male patient presented with a 13-year history of inability to close both eyes normally. Physical examination revealed that the patient had infranuclear facial palsy with deviation of the mouth to the right side. The palpebral aperture widths of the right and left eye were 3 and 5 mm (i.e. lagophthalmos), respectively. Erythema was observed in the intercilium with loss of the eyebrows and eyelashes (Figure 1). Any attempt to close the eyelids resulted in the upper rotation of the eyeballs only (Bell’s sign). The patient was diagnosed with lepromatous leprosy with Bell’s sign and lagophthalmos; his mother suffered from lepromatous leprosy. The patient lived in the leprosy settlements of Shangluo, Shaanxi Province, and he received free multidrug therapy. Artificial eyebrows were implanted in 2010 due to social stigma. There was no obvious improvement in lagophthalmos or facial palsy, and Bell’s sign was positive. Paralysis of the orbicularis oculi muscle has implications for lid closure. Lagophthalmos can lead to exposure keratopathy, as well as corneal ulceration, acute or chronic iridocyclitis, and secondary cataracts, which are four main causes of visual impairment or blindness in leprosy. However, many of these can be prevented entirely or treated successfully. Lubricants, botulinum toxin injection, temporary tarsorrhaphy, gold weight insertion and other surgical procedures may also help. As to Bell’s sign, systemic steroids and/or acyclovir have been recommended previously; however, there is no clear evidence that this treatment is efficacious.

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