

Case Report

MUMPS INDUCED FACIAL PALSY

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ABSTRACT

Mumps is a highly contagious but common viral infection caused by a paramyxovirus. Though parotitis is the most characteristic finding but complications of mumps may include meningitis, meningoencephalitis, pancreatitis, permanent deafness, orchitis and oophoritis. However, peripheral facial palsy in association with parotitis is rare and exact incidence is still unknown (Endo *et al.*, 2001; Beardwell, 1969). This report describes the case of an adult male who developed unilateral facial nerve palsy following mumps parotitis with epididymo-orchitis.

Keywords: Mumps Parotitis, Facial Palsy

INTRODUCTION

Facial palsy is a common condition and Bell's palsy (idiopathic) being the most common form with an annual incidence of immunodeficiency virus has been reported to cause acute peripheral facial paralysis (Endo *et al.*, 2001; Beal and Hauser, 2012). Causes of acquired facial paralysis include trauma, infections, inflammatory diseases and neoplasia. Viruses have been associated with facial palsy like varicella-zoster virus, herpes simplex virus Type 1, Epstein-Barr virus, Cytomegalovirus, mumps virus more recently human *al.*, 2001).

CASES

A 30 year old male admitted with the complaints of difficulty in closing his right eye, facial asymmetry, drooling of food and saliva from right corner of mouth along with impaired taste sensation. There was no history of dryness of eyes and increased sensitivity of sound. On examination, right side of the face revealed loss of furrowing of forehead and loss of prominence of nasolabial fold with deviation of angle of mouth towards left side and presence of Bell's phenomenon. The remaining neurological examination was within normal limits and there was no evidence of meningitis or encephalitis.

Past history revealed that the patient was hospitalized and managed in Surgery ward for mumps associated bilateral parotitis and right sided epididymo-orchitis.

Based on clinical examination and past historical background patient was started on prednisolone therapy (1 mg/Kg) for treatment of post viral right sided Bell's palsy. Patient improved with therapy and weakness and other symptoms resolved by fourth week of tapering prednisolone therapy.

DISCUSSION

Facial palsy is a common condition and Bell's palsy (idiopathic) being the most common form with an annual incidence of immunodeficiency virus has been reported to cause acute peripheral facial paralysis (Endo *et al.*, 2001) 25 per 100,000 annually, or about 1 in 60 persons in a lifetime (Beal and Hauser, 2012). Causes of acquired facial paralysis include trauma, infections, inflammatory diseases and neoplasia. Amongst infections viruses have been associated with facial palsy like varicella-zoster virus, herpes simplex virus Type 1, Epstein-Barr virus, Cytomegalovirus, mumps virus more recently human *al.*, 2001). Though the pathogenesis of peripheral facial palsy is unknown, but immune-mediated and viral infections are some of the proposed underlying mechanisms of this condition (Honda and Takahashi, 1992). It is likely that the immunologic response associated with viral infection triggers facial nerve compression, degeneration, and paralysis (Morgan and Nathwani, 1992). Increasing evidence suggests that Bell's palsy is caused by reactivation of HSV-1. However, the association of other viral infections with the

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pathogenesis of facial paralysis remains largely unclear because of the paucity of reports (Adour *et al.*, 1975; Murakami *et al.*, 1996).

The incidence of facial palsy with mumps parotitis is unknown, but the association appears to be rare. Saunders and Lippy (in 1959) first described four patients with facial palsy associated with mumps virus infections (Saunders and Lippy, 1959). Following this a small number of other reports have suggested the possible association of the mumps viral infection with peripheral facial paralysis (Endo *et al.*, 2001; Beardwell, 1969; Pang and Raine, 1996; Folayan *et al.*, 2014). Complete recovery in about seventy percent cases in mumps induced facial palsy has been reported in a pediatric series (Folayan *et al.*, 2014). But no such series in adults is presently available in literature.

Facial palsy in mumps generally develops within 3-10 days after onset of mumps parotitis (Endo *et al.*, 2001; Beardwell, 1969; Saunders and Lippy, 1959; Folayan *et al.*, 2014). Although temporal criteria for reported facial palsy following MMR vaccination has been three months which is possibly due to immunogenic response (BCCDC, 2014) but literature is silent regarding duration of manifestation of facial palsy due to immunogenic response in other situations. The present case where facial palsy was reported twenty days after the onset of mumps may belong to the latter category i.e. immunogenic response.

Our case thus presented with both common and rare complications of mumps; orchitis and facial palsy respectively.

Conclusion

In conclusion, there might be a relationship, more common than what is generally thought, between mumps virus infection and peripheral facial palsy. Therefore, it would be beneficial for physicians who manage facial nerve paralysis to keep this possible pathology in mind and to perform thorough investigations including serological tests for mumps when encountering the patients with peripheral facial paralysis.

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Indian Journal of Medical Case Reports ISSN: 2319–3832(Online)

An Open Access, Online International Journal Available at <http://www.cibtech.org/jcr.htm>

2015 Vol. 4 (2) April-June, pp.95-97/Singh et al.

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