

## Facial palsy caused by mumps parotitis

Sir,

Mumps is a common viral infection caused by a paramyxovirus. The feature most characteristic of mumps is swelling of the salivary glands. Meningitis, meningoencephalitis, deafness, orchitis and oophoritis may occur in addition to parotitis. However, peripheral facial palsy in association with parotitis is rare.<sup>[1,2]</sup> This report describes two cases of children who presented with unilateral facial nerve paralysis after mumps parotitis.

A previously healthy four-year-old boy was admitted to our clinic with complaints of pain and swelling in both parotid glands and mild fever. Serum and urine amylase were 950 U/L (28-100 U/L), 1340 U/L (< 460 U/L) respectively. IgM anti-mumps antibody by an enzyme-linked immunosorbent assay was detected. On the seventh day of the illness, when parotid gland swelling was no longer evident, his parents observed that he could not close his right eye and there was facial asymmetry when he cried or smiled. Neurological examination revealed that there was asymmetry with droop of corner of mouth on the right side of the face; he was unable to close the right eye. The rest of the physical and neurological examination was normal. He was diagnosed to have right facial palsy and mumps infection was considered the most likely cause. No clinical signs of meningitis or encephalitis were present, and lumbar puncture was not performed. Oral administration of antihistaminic and antiinflammatory were started at that time. Improvement of facial palsy was observed two months later in his follow-up examination.

Our second case was a 12-year-old girl admitted to our hospital because of left facial nerve palsy. At 10 days before admission she had a history of weakness on the left side of her face and that there was facial asymmetry. The symptoms developed 10 days after mumps parotitis. She was given oral prednisolone therapy in another hospital for Bell's palsy but no improvement was observed. Physical examination showed complete left peripheral facial palsy. The rest of the physical and neurological examination was normal. There were no meningeal irritation signs. Serum and urine amylase were 1250 U/L, 1130 U/L respectively. IgM anti-mumps antibody was positive. The facial palsy resolved completely by 10 weeks after onset.

Facial palsy is a well-known pediatric condition, with an incidence of 2.7 per 100,000 children under age 10 years. Causes of acquired facial paralysis include trauma, infectious and inflammatory diseases, and neoplasia.<sup>[1]</sup> Viral infections might also be associated with facial paralysis. For example, varicella-zoster virus, herpes simplex virus Type 1, Epstein-Barr virus, mumps virus and more recently human immunodeficiency virus have all been reported to cause acute peripheral facial paralysis in children.<sup>[1]</sup> The pathogenesis of peripheral facial palsy is unknown, but immune-mediated and viral infections are some of the proposed underlying mechanisms of this condition. It is considered that it is caused by the inflammation triggered by the virus.<sup>[3]</sup>

The incidence of facial palsy with mumps parotitis is unknown, but the association appears to be rare. Saunders and Lippy<sup>[4]</sup> first described four patients with facial palsy associated with mumps virus infection in 1959. Pang *et al.*,<sup>[5]</sup> Endo *et al.*,<sup>[1]</sup> Beardwell<sup>[2]</sup> and Pang *et al.*,<sup>[5]</sup> have reported facial palsy associated with mumps parotitis in the literature. Facial palsy developed three to nine days after onset of mumps parotitis in these patients. Similarly, facial palsy developed seven and 10 days later in our patients and recovered completely after two and three months respectively.

In conclusion, there might be a relationship between mumps virus infection and peripheral facial palsy. Therefore, the etiology of facial palsy in children should be thoroughly investigated.

**Faruk Incecik, M. Ozlem Hergüner,  
Sakir Altunbasak**

*Division of Pediatric Neurology, Department of Pediatrics, Cukurova  
University Faculty of Medicine, Adana, Turkey.  
E-mail: fincecik@yahoo.com*

DOI: 10.4103/0028-3886.55589

## References

1. Endo A, Izumi H, Miyashita M, Okubo O, Harada K. Facial palsy associated with mumps parotitis. *Pediatr Infect Dis J* 2001;20:815-6.
2. Beardwell A. Facial palsy due to mumps virus. *Br J Clin Pract* 1969;23:37-8.
3. Honda H, Takahashi A. Virus-associated demyelination in the pathogenesis of Bell's palsy. *Intern Med* 1992;31:1250-6.
4. Saunders WH, Lippy WH. Sudden deafness and Bell's palsy: A common cause. *Ann Otol Rhinol Laryngol* 1959;68:830-7.
5. Pang YT, Raine CH. Acute suppurative parotitis and facial paralysis. *J Laryngol Otol* 1996;110:91-2.

---

Accepted on 13-01-2009