

Case Report

Varicella Zoster Virus as Cause of Delayed Facial Palsy after Mastoid Surgery

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Abstract

We reported a case of delayed facial palsy (DFP) after mastoid surgery in twelve years old boy. Objective: is to study the possibility of reactivation of Varicella Zoster Virus as a possible cause and to review related literatures.

INTRODUCTION

The pathogenesis of DFP is still unknown; however there are many reasons behind delayed facial nerve paralysis. Facial nerve palsy in children is usually idiopathic but can also result from many conditions such as neoplastic, systemic diseases, or congenital anomalies with poor prognosis [1]. Possibility of the viral origin remains the most proposed one, Serological investigations in those patients might revealed raised titres of immunoglobulin (Ig) M and IgG to *varicella-zoster virus*, confirming the presence of varicella-zoster infection [5].

We presenting a case of DFP after mastoid surgery and we are investigating the possibilities of the viral infection. Doing a blood test to roll out this possibility is advisable, but don't necessity the use of anti viral treatment. This case could confirm viral reactivation to be an important aetiological factor in the development of delayed onset facial nerve palsy.

CASE REPORT

A 12 years old boy presented to our department with a history of discharging left ear due to cholesteatoma. He has been listed for Left mastoid surgery for cholesteatoma in November/2012. The operative Findings showed an extensive disease within the tympana-mastoid area. The facial nerve canal was intact. Post op period uneventful and the child discharged home on the second postoperative day with intact facial nerve function.

On the 10th post op day, the child attended the night A & E with has left sided facial weakness classified as at grade 2 (House-Brakeman). There was no auricular or facial eruption and the ear is not discharging. The immediate care included the removal of the pack from the left ear, Prednisolone tab for five days and antibiotic ear drops. We didn't prescribe any antiviral drug. He was reviewed the next morning and there was some improvement and seen on regular bases every three days. A full recovery of the facial nerve function was seen in two weeks times.

Serological investigations revealed raised titers of immunoglobulin IgG and normal level for IgM to Varicella-zoster virus, confirming the presence of Varicella-zoster infection.

DISCUSSION

Delayed facial palsy (DFP) is described after all types of otological procedures; though usually reversible, it is a cause of dissatisfaction for the patient and the surgeon.

We present a case of DFP that occurred as a consequence of middle-ear surgery by triggering *Varicella-zoster virus* reactivation. As a pathognomonic auricular eruption was not seen, the patient was initially diagnosed as iatrogenic facial palsy. The pathogenesis of DFP is still unknown, the viral origin remains the most proposed one (herpes simplex virus type 1 and *varicella zoster virus*). Published data for otologic surgery suggest a rising incidence of DFP with increased manipulation of the sensory branches of the facial nerve. Viral reactivation is postulated to be an important contributing mechanism in the development of Delayed Facial Palsy. Our case record confirms viral reactivation to be an important etiological factor in the development of delayed onset facial nerve palsy [2-4]

The incidence of delayed facial nerve palsy following tympano-mastoid surgery is low. It can occur up to two weeks after the surgery. The overall prognosis for delayed facial nerve palsy following tympano-mastoid surgery appears to be good. In our patient, the facial nerve function recovered completely in two weeks time. Other recovers show the recovery some time takes longer even six months [2,3]. The use of antiviral drug is questionable; we didn't use any in our case and it recovered completely in two weeks time. Safdar A, et al., reported the combined use of prednisone and acyclovir was an effective form of treatment for DFP patients, whose facial nerve function fully recovered within six months of onset. Vrabec JT et al., proposed that a history of *herpes* labialis reactivation in the last years or immune depression status represent alone an indication to the

prophylactic antiviral therapy. They recommended a schedule of (oral valacyclovir beginning 1 day before the procedure and continuing for 10 days postoperatively) in all otological and neurotological procedure [2-4].

CONCLUSION

Varicella Zoster Virus infection could be blamed for causing delayed facial nerve paralysis after mastoid surgery. Doing a blood test to roll out this possibility is advisable, but don't necessate the use of anti viral treatment. This case could confirm viral reactivation to be an important aetiological factor in the development of delayed onset facial nerve palsy. The overall prognosis for delayed facial nerve palsy still very good.

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