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Case Report

Parotid abscess with facial nerve paralysis in a young healthy female

Irfan Mohamad[1], M Zaki Ahmad[2], Hazama Mohamad[1]

Abstract:

Introduction: Benign parotid lesion is rarely associated with facial nerve paralysis. If it happens, it is mainly due to the compression effect on the nerve and usually will recover after surgical intervention. Few cases of parotid abscess which involved facial nerve, mainly in elderly have been reported.

Case report: In our case, we would like to report a case of parotid abscess in a young healthy female. The abscess has extended to parapharyngeal space and complicated by facial nerve paralysis.

Conclusion: Conservative management was implemented while waiting for the natural recovery of facial nerve paralysis in cases of parotid abscess. These included gold-weight lid implant for corneal protection.. Despite of spontaneous recovery, there were cases the paralyzed facial nerve remained even after 6 months.

Key words: *Parotid abscess, facial paralysis.*

Introduction:

Involvement of facial nerve is a rare complication of parotid lesion especially the benign ones. Facial nerve dysfunction as a result of parotid infection is exceedingly rare, with 14 cases reported previously in the world literature.[1] Majority of them affect elderly patients with underlying co-morbidity especially diabetes. We report a case of parotid abscess in a normal healthy young female, which developed facial nerve paralysis after she was admitted.

Case report:

A 20-year-old Malay female presented with three weeks history of right sided neck mass. It was increasing in size associated with low grade fever. She also experienced trismus which made her to have reduced oral intake.

Examination revealed a 5 x 6 cm fluctuant neck mass at the area of right angle of mandible, displacing the ear lobe anteriorly. Limited oral examination showed pus at the right Stenson's duct opening. Right lateral pharyngeal wall was slightly medialized.

1. Senior Lecturer, Department of Otorhinolaryngology - Head & Neck Surgery, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kota Bharu, Kelantan, Malaysia.
2. Medical Officer/Resident, Department of Otorhinolaryngology - Head & Neck Surgery, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kota Bharu, Kelantan, Malaysia.

Address for Correspondence: Dr Irfan Mohamad, Senior Lecturer, Department of Otorhinolaryngology – Head & Neck Surgery, School of Medical Sciences, Universiti Sains Malaysia,16150 Kota Bharu, Kelantan, Malaysia.. Tel: 09-7676420, E-mail: irfan@kb.usm.my

Otoscopy of the right ear showed pus coming out from the floor of the canal.

Aspiration of the mass retrieved 2 cc of pus. She was admitted and planned for incision and drainage. Intravenous antibiotics were started. Pus sent for culture and sensitivity revealed mixed growth.

On the next day, she developed right sided facial nerve palsy of House Brackmann (HB) grade 2. Computed tomography scan was obtained before surgery. There was an extensive pus collection in the right parotid gland communicating with the parapharyngeal space.

Incision and drainage under general anesthesia was performed. Fifty mililitres of pus obtained was sent for culture and sensitivity. Post operative period was uneventful. She was discharged home with residual facial nerve paralysis.

During clinic follow-up one week later, she showed good recovery. Facial nerve function returned to normal. No residual mass was noted. She was investigated for diabetes and tuberculosis and was found out to be negative. The result of culture and sensitivity of pus taken intra-operatively showed no growth.

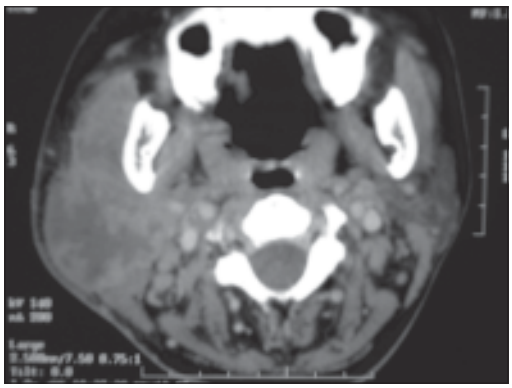

Figure 1: *CT scan showed right parotid abscess with early extension to parapharyngeal space.*

Discussion:

Parotid abscess is known to affect elderly patients with diabetes. A series of 15 patients with parotid abscess revealed the mean age of presentation was 51 and 6 of them were diabetics.[2] Immuno-compromised patients were also predisposed to have this condition.[3]

Facial nerve paralysis is a rare complication of acute parotitis with or without abscess. It usually occurs during the acute phase of the disease and subsides with treatment. The facial nerve dysfunction can be partial of complete.[3] The degree of paralysis can be varied. In a study it was reported a 45-year-old woman who developed facial paralysis HB (House-Brackmann) grade 5 secondary to an occult parotid abscess.[4]

The mechanism of facial nerve involvement proposed includes perineuritis and local toxic effects from the intense surrounding parotitis besides the ischemic neuropathy related to the rapid expansion of the infectious parotid mass with compression of the facial nerve.[1]

Radiological imaging is less helpful when a frank abscess is formed, evidenced by fluctuation on palpation and positive of pus on aspiration. However, a parotid abscess may mimic parotitis as the capsule of the parotid itself is known to be very thick and thus making the palpation is less reliable. When there is clinical suspicious, the imaging should be requested to determine the formation of pus and subsequently the mode of treatment. In this case, a CT scan was ordered in view of complicating facial nerve paralysis as well as to establish the communication between the parotid and the parapharyngeal space.

Incision and drainage is the treatment of choice in parotid abscess. Initiation of broad spectrum antibiotics was mandatory in any inflammatory parotitis secondary to infection. In cases without obvious abscess, surgical

drainage is reserved after the conservative management failed.[5, 6]

The recovery of facial nerve paralysis in cases of parotid abscess varies. However, it usually improved with time and can be up to four months. Conservative management was implemented while waiting for the natural recovery. These included gold-weight lid implant for corneal protection.[1] Despite of spontaneous recovery, there were cases the paralyzed facial nerve remained even after 6 months.[3]

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