Facial Palsy Following Fine Needle Aspiration Biopsy of Parotid Hemangioma: A Case Report and Review of the Literature

Dr. Mohan Kameswaran, FRCS, MS
Dr. Saeed Abu-Eshy, FRCS
Dr. Jamal Hamdi, FRCS

Hemangioma of the parotid, although not uncommon in childhood, is rare in adult life. Rarely these vascular 'tumors' present as acute emergencies with sudden increase in tumor size and associated with excruciating pain, presumably due to sudden hemorrhage. We report here an interesting case of a cavernous hemangioma of the parotid, which presented with sudden swelling, pain and trismus and developed complete lower motor neuron facial palsy within a few hours after a fine needle aspiration biopsy of the lesion was performed.

Case Report

A 34-year-old Filipino man presented to the emergency room of the Asir Central Hospital with a swelling in the left parotid region. The patient had previously noticed a small swelling in the same area 5 years earlier but had not sought any medical help since it caused him no discomfort whatsoever. The night preceding his admission however, the patient had woken up from sleep with sudden excruciating pain accompanied by a marked increase in the size of the swelling. At the time of his admission early the next morning, the patient had marked trismus and was limited to taking small sips of fluid by mouth. Clinical examination revealed a large swelling in the region of the left parotid. The swelling was firm in consistency, not fluctuant, warm and tender on palpation. Two hours after his admission, the patient underwent fine needle aspiration biopsy of the lesion and a hemorrhagic aspirate was obtained and sent for cytological examination. About 8 hours later, the patient developed ipsilateral weakness of the facial nerve which evolved into a complete paralysis over a period of one hour. Routine hematological and biochemical tests including tests for HIV were found to be within normal limits. CT Scan of the parotid gland (Fig. 1) showed a large lobulated left parotid gland swelling extending to the parapharyngeal space with displacement of the pharyngeal wall medially.

The patient was explored a few hours later and a hemangioma occupying the deep lobe of the parotid with an associated large hematoma was found. The patient underwent total parotidectomy with preservation of the facial nerve. Histopathology revealed a cavernous hemangioma within the deep lobe of the parotid gland with extravasation of blood. Postoperatively, the patient was relieved of pain and trismus almost immediately and was on a normal diet within 24 hours. At follow-up, the facial nerve electrophysiological conduction studies were reported as being normal on the fourth post-op day and was unchanged on the eleventh post-op day. The patient showed signs of facial recovery by the fourth post-op week and was fully recovered by the sixth post-op week.

Discussion

Hemangiomas of the parotid, although uncommon in adult life, do occur from time to time, simulating parotid neoplasm.[1] They may rarely present with pain, swelling[2] and trismus.[3] Fine needle aspiration biopsy of the parotid

College of Medicine, King Saud University, ABHA SAUDI ARABIA.

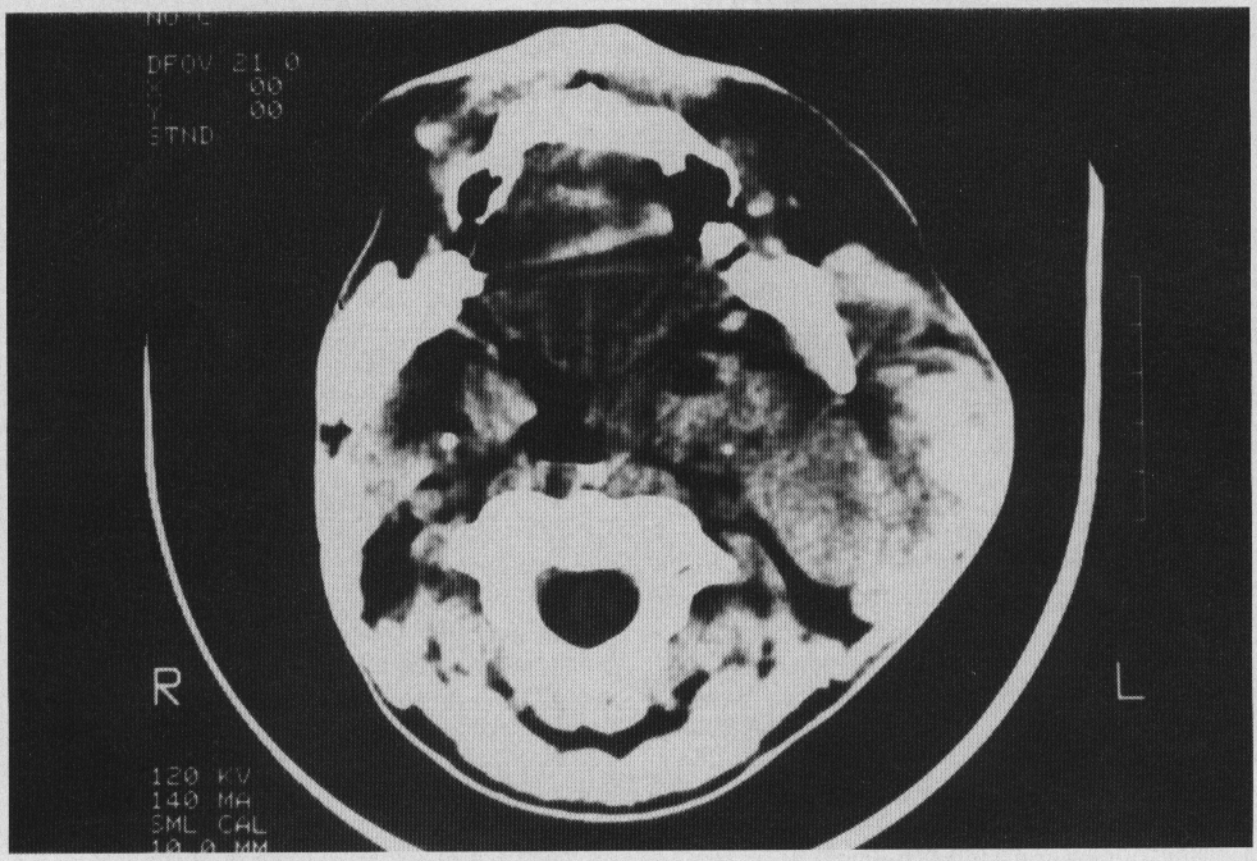

Figure. Computerized tomography of the parotid showing the non-homogenous mass in the left parotid extending to the parapharyngeal space and displacing the pharyngeal wall medially.

swellings is generally accepted as a safe procedure.[4] However, the sudden onset of facial palsy following fine needle aspiration biopsy as seen in our patient seems to have been unreported previously. To the best of our knowledge, there is only one other report of a sudden facial palsy occurring in association with a vascular 'tumor' of the parotid.[5] The onset of the facial palsy a few hours after the fine needle aspiration biopsy, its evolution into a complete paralysis over a period of approximately one hour, and the subsequent recovery of the paralysis post-operatively, all lead us to believe that compression of the facial nerve by a hematoma may have been responsible for the facial palsy. Further, at surgical exploration a large hematoma was found in the deep lobe immediately subjacent to the facial nerve.

Fine needle aspiration biopsy of the parotid gland for the diagnosis of parotid swellings is a well established and safe procedure.[4] When carrying out this procedure in the presence of vascular 'tumors' however, the risk of hemorrhage into the substance of the gland with its attendant risk of facial palsy is, in our opinion, very real. Fine needle aspiration biopsy of parotid swellings is perhaps best avoided if a vascular 'tumor' is suspected.

Summary

We present here a case of cavernous hemangioma of the parotid which presented as an acute emergency with sudden pain, trismus and swelling. The patient subsequently developed a complete lower motor neuron facial palsy a few hours after a fine needle aspiration biopsy was performed. Total parotidectomy with preservation of the facial nerve relieved the patient of all his symptoms with complete recovery of facial function in six weeks.

References

1. Narasimharao KL, Patel RV, Mitra S, et al. Mixed angioma of parotid gland simulating malignancy. Laryngoscope 1988; 98:818-21.
2. Chuong R, Oonoff RB. Intraparotid hemangioma in an adult. Case report and review of the literature. Int J Oral Surg 1984; 13(4):346-51.
3. Tovi F, Zirken H, Sidi J. Trismus resulting from a parotid hemangioma. J Oral Maxillofac Surg 1983; 41(7):468-9.
4. Goldberg NH, Cuono CB, Ariyan S, et al. Improved reliability in tumor diagnosis by fine needle aspiration. Plast Reconstr Surg 1981; 67:492.
5. May M, Lucente FE, Farrell FW. Facial palsy, Bell's versus parotid vascular malformation. Laryngoscope 1973; 83:2020.
6. Mussbaum M, Tan S, Som ML. Hemangiomas of the salivary glands. Laryngoscope 1976; 86:1015-9.
7. Faber RG, Ibrahim SZ, Brew OSTJ, et al. Vascular malformation of the parotid region. Br J Surg 1978; 65:771.