Facial nerve paresis caused by benign parotid neoplasms: A case report and review of the literature

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CASE REPORT

The patient is a 25-year-old healthy male presenting to the outpatient otolaryngology clinic of a tertiary care medical center with an enlarging right parotid mass. By history, the mass had been present for several years, growing slowly, and more recently had become slightly tender and associated with notable facial weakness. Physical examination was significant for a 4-cm firm right-sided parotid mass and weakness of the lower division of the facial nerve apparent during active expression (Figure 1). Subsequent CT of the neck demonstrated a heterogeneous intraparotid mass with somewhat ill-defined margins (Figure 2); fine needle aspiration (FNA) was non-diagnostic. The patient was counseled extensively as to the possible malignant nature of the mass as well as the increased risk to the facial nerve during surgery given his preoperative dysfunction. He was taken to the operating room where a fairly well-encapsulated parotid tumor was found displacing and stretching the lower branches of the facial nerve. The mass was able to be resected completely with nerve preservation; final pathology revealed a pleomorphic adenoma. The patient’s postoperative course was uneventful with facial nerve function recovering completely over the course of a few weeks.

DISCUSSION

Numerous case series have demonstrated the importance of facial nerve palsy as an indicator of underlying malignancy in the presence of an associated parotid mass. In fact, Eneroth’s survey of over 2000 cases of parotid neoplasms found that all tumors presenting with facial weakness were malignant. Despite this, a review of the English literature revealed over 20 cases of facial nerve paresis caused by benign parotid neoplasms. Most of these occurred with tumor recurrence or in the setting of infection, hemorrhage or necrosis as can be seen in cystic degeneration of Warthin’s tumors. Additional described mechanisms are nerve stretching and compression leading to gradual ischemic damage and axonal disruption similar to the way in which acoustic neuromas may induce deficits of the vestibulocochlear nerve. Areas of particular susceptibility are those adjacent to fixed segments of the nerve as can occur near the stylomastoid foramen. Overall there seems to be an equal histopathologic distribution between Warthin’s tumor and pleomorphic adenoma. Recovery of function after surgery is variable, and patients with longstanding parotid masses with associated facial nerve weakness tended to do poorer even with gross nerve preservation.

CONCLUSIONS

- A parotid mass associated with facial nerve dysfunction typically heralds the presence of malignancy.
- Such information is critical to appropriate patient counseling and surgical planning in terms of how the parotid mass, facial nerve and cervical lymph nodes may be managed.
- Benign parotid tumors may also rarely lead to facial palsy due to mechanical forces.
- Nerve preservation should be attempted in these cases; however, depending on the timeframe of presentation and degree of deficit, recovery of facial function will be variable.