Photoclinic

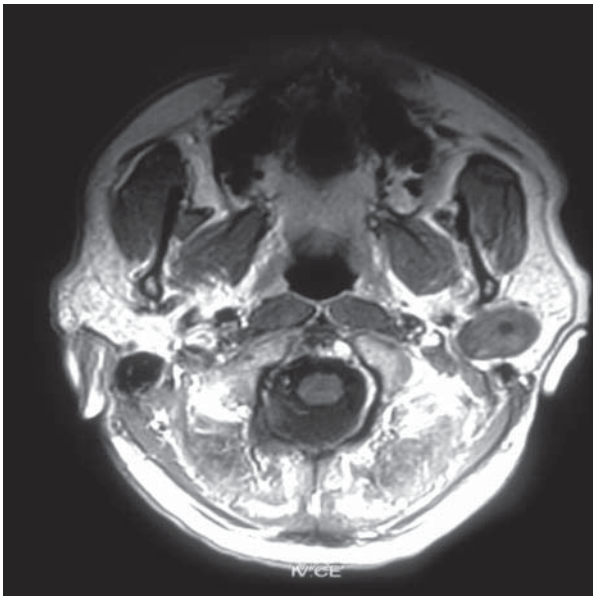

Figure 1. T1 weight MRI image exhibited a round hypointense mass in parotid region with partial enhancement post gadolinium injection.

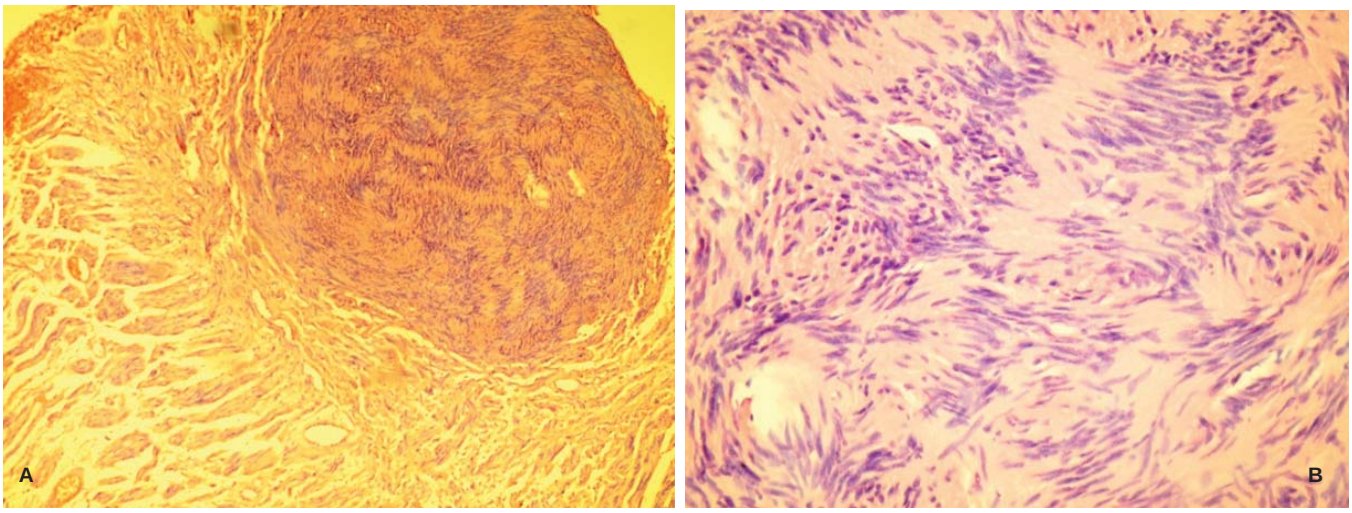

Figure 2. A) Section showed a an alternating hypercellular-Hypocellular spindle cell neoplasm (Hematoxylin and eosin stain × 40); **B)** Higher magnification of mass histologic section depicted palisaded spindle cells which focally whorled around the intervening stroma forming verocay bodies (Hematoxylin and eosin stain × 400).

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The patient was a 41-year-old man with a small infra-auricular mass for twenty years. The mass was painless and mobile for many years. However, it became larger and reached 2 cm during 6 months. Mass enlargement led to pain, especially in the cervical region. Sonography showed a well circumscribed hypoechoic mass measuring 26 mm × 17 mm in the parotid region with focal cystic change. Magnetic Resonance Imaging revealed a relatively large well-defined mass with low to intermediate signal in T1 weighted images, intermediate to high signals in T2 weighted and partial enhancement post gadolinium injection (Figure 1). Finally, the patient underwent surgery. During operation, the surgeon found a cystic mass attached to the facial nerve, so he requested an intraoperative consultation. The frozen section revealed a benign neoplastic growth composed of wavy spindle cells with focal palisading in hypercellular areas which were separated by myxoid hypocellular regions (Figure 2A and 2B)

What is your diagnosis?
See the next page for diagnosis

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Photoclinic Diagnosis: Intraparotid Facial Nerve Schwannoma

Schwannomas or neurilemommas are uncommon benign neurogenic neoplasms that can originate from any peripheral, autonomic or cranial nerve except olfactory and optic nerves.[1] Head and neck schwannoma comprises 25% to 40% of this benign neurogenic tumor.[2,3] In contrary to well-description of acoustic nerve schwannoma, facial nerve schwannomas are scarce. Intraparotid facial nerve schwannoma (IPFN) is very rare and accounts for 0.2% to 1.5% of parotid tumors.[3,4] They are usually asymptomatic and present as a painless parotid mass with normal facial function.[5,6]

Schwannoma has characteristic signs on magnetic resonance imaging such as fasicular and target sign in addition to specific signal patterns (i.e. isointensity on T1 weighted images and hyperintensity on T2 weighted images). So, MRI with gadolinium has turned out to be the method of choice for imaging. Postcontrast imaging shows relative enhancement with focal cystic change which can predominate with tumor enlargement.[7] This cystic transformation can be a consequence of mucinous degeneration, necrosis, hemorrhage or microcystic change.[1,8] Despite characteristic radiologic signs and pattern of schwannoma, preoperative diagnostic modalities are neither sensitive nor specific for IPFNS. Most of IPFNS have been diagnosed intraoperatively on the basis of their close association with facial nerve and also frozen section histopathology.[9]

Management of IPFNS is a matter of debate. Most important factors that determine treatment strategy include preoperative facial nerve function, gross attachment of tumor to the facial nerve (defined as loosely attached or intertwined) and finally location of tumor (defined as intratemporal or exclusively intraparotid). Resection of intraparotid tumor is mainstay of treatment for separable and loosely attached tumors. Observation is preferred for inseparable intraparotid tumors in which facial nerve function is grade III/IV or better according to House Brackman classification. Finally, resection of mass and grafting is the method of choice for tumors that extend intratemporal region via stylomastoid foramen. However, if facial nerve function is desirable, tumor debulking, mastoidectomy and annual imaging can be a proper alternative.[10]

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