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Lipoma in the parotid gland: a clinical case presentation

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Abstract

Lipoma of the parotid gland is a rare benign mesenchymal tumor. It is seldom considered in the differential diagnosis of the salivary glands pathology. Lipoma represents approximately 1% of the parotid gland tumors.

We report a clinical case of a 54-year-old male patient presented with 5-year history of painless, slow-growing mass in the left parotid gland. The management of choice was surgical removal of the lateral lobe of the parotid gland with facial nerve preservation. No tumor recurrence, facial nerve palsy or pain was noted postoperatively.

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Keywords: lipoma, parotid gland, benign tumor, mesenchymal tumors

Introduction

Lipoma is a benign tumor of mesenchymal origin, commonly found in regions of the body where fat tissue is normally present. It generally occurs in the upper back, shoulders and abdominal area, as the head and neck region is affected in approximately 15% to 20% of the cases (1). Lipoma is rarely observed in the region of the parotid gland. Thus the incidence of this benign neoplasm accounts for approximately 1% of all parotid tumors (2). It is infrequently considered in the differential diagnosis of the parotid gland tumors, as there are no specific symptoms known. Till 1991 about 140 cases have been described (3). Nowadays the number of the reported parotid lipoma cases in the literature is expected to be increased, although most reports usually refer to short communications, individual case reports or small case series. However, to the best of our knowledge, no case of parotid gland lipoma has previously been reported in Bulgaria.

Case report

We report a clinical case of a 54-year-old male patient presented in our clinic with 5-year history of a slow-growing, painless swelling in the left parotid gland. The patient had sought medical consultation nearly a year ago, but had been unwilling to undergo surgical removal of the formation due to the postoperative consequences. Rapid tumor growth has been noticed within the past 5-6 months.

Clinical examination revealed a mobile, non-tender soft tissue mass that measured 5 x 4 cm in size, situated in the left parotideomasseteric space (in the mandibular part of the left parotid gland). The surface of the formation was smooth and the overlying skin was normal without any symptoms of discoloration (i.e. redness or cyanosis) or tumor-adhesion (Fig. 1). The function of the facial nerve was intact with no impaired function of the mimic muscles. No other masses in the head and neck region were found on the clinical examination via physical methods.

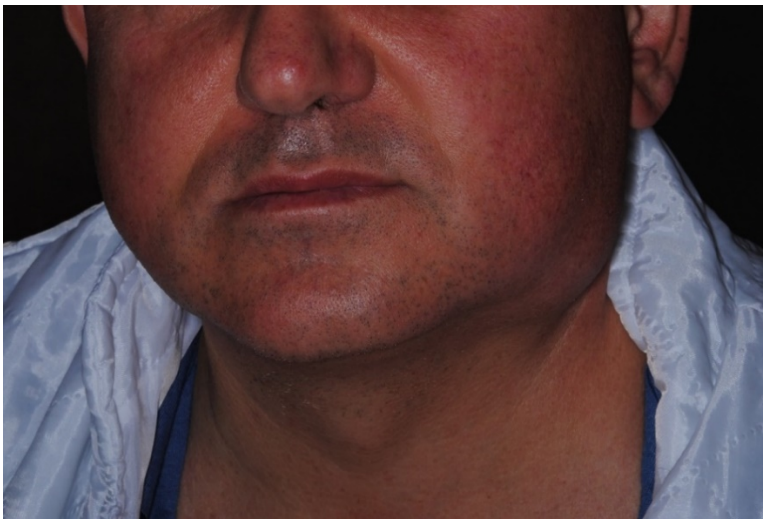

Fig. 1 – Patient, presented with non-painful swelling in the left parotid gland; no discoloration on the overlying skin is observed

A high-resolution CT (computed tomography) scan examination performed one year before patient`s admission in our clinic, revealed presence of well-defined, encapsulated nodular formation in the superficial lobe of the left parotid gland with homogeneous fat-equivalent imaging appearance (about -120 Hounsfield units) that measured 2,6 x 1,9 x 3,2 cm. No symptoms of infiltration were found. MRI (Magnetic Resonance Images) performed in our clinic showed increased size of the tumor when compared to the previous examination. The formation measured 4,5 x 4 cm with no symptoms of aggressive growth and infiltration (Fig. 2A,B).

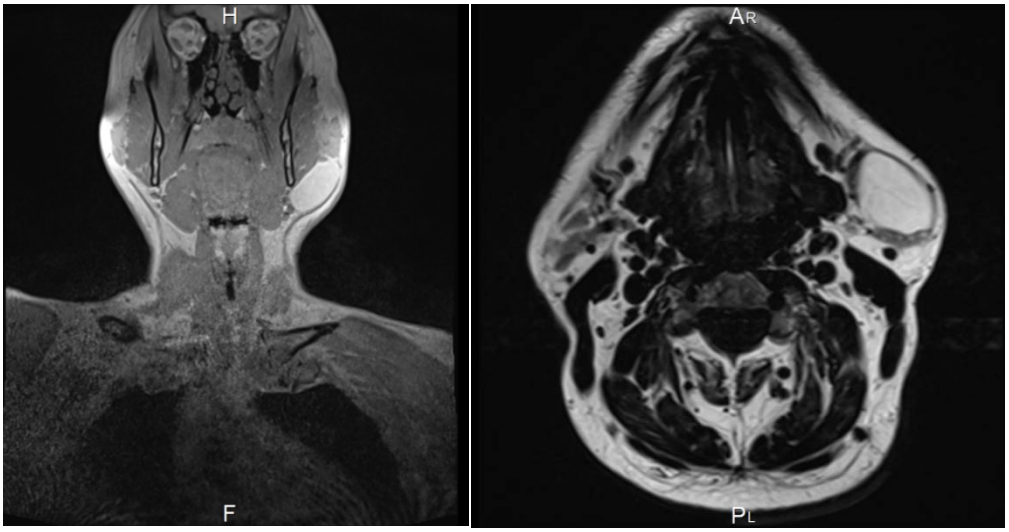

Fig. 2A,B – Imaging methods for examination: MRI, showing tumor formation in the left parotid gland

A classic parotiedectomy incision was made and the main trunk of the facial nerve was identified, dissected and remained undamaged, as well as its branches. The yellow tumor mass was found bellow the capsule, in the superficial mandibular lobe of the parotid gland (Fig. 3).

Fig. 3 – The resected lipoma measured 4,5 x 4 cm in size

Tumor projections within the gland parenchyma were observed. This led to the removal of the whole lateral part of the parotid gland. The surgical specimen was well encapsulated with macroscopic appearance of lipoma (Fig. 3). The histopathological examination confirmed the diagnosis. Postoperative morbidities, including tumor recurrence, Frey's syndrome or facial nerve palsy were not observed.

Discussion

Lipomas are the most common benign mesenchymal tumors, histologically similar to mature adipose tissue. The presence of fibrous capsule helps to distinguish them from simple fat tissue aggregates (4). Lipoma in the parotid gland shows no difference in its biologic behavior than lipomas located elsewhere in the body. Parotid gland lipoma is usually seen in the lateral lobe, as lipomas involving the deep part of the gland are postulated to be extremely rare (5).

Of what we observed in the present clinical case of long-term slow-growing painless mass, what makes the patient seek for medical advice and care is mainly the facial asymmetry and the cosmetic issues. No functional disturbances as well as pain and numbness are presented. Thus the patient may “carry” this tumor for a long period of time until it significantly increases in size. In our case no symptoms of pain or facial nerve palsy were observed, eventhough the tumor was relatively large in size with extensions in the gland parenchyma and tension over the facial nerve branches. Based on the reports in the literature pain and motor disturbances (facial paralysis) are uncommonly seen when parotid lipoma is observed (6).

It’s been postulated that salivary gland lipoma is a tumor that gradually increases in size or becomes stationary after a period of active growth (7). However, we observed a tumor with a history of very slow growth within the firs 4,5 years, followed by remarkable rapid enlargement in the past 5-6 months. Eventhough lipoma is a nonaggressive benign tumor, the clinicians should be certain about the diagnosis at the time of the surgery due to the multiple benign lesions that mimic its clinical appearance. Various pathologies are considered in the differential diagnosis of parotid gland lipoma, including hemangioma, limphangioma, pleomorphic adenoma, cystadenoma, etc.

Many imaging techniques might be applied in the diagnostic evaluation of salivary glands pathology. Plain radiographs, ultrasonography, sialography, CT scan, MRI and combination of them are commonly considered applicable (8). We do not usually recommend sialography, as we consider it more invasive procedure. Imaging methods of choice nowadays are CT scan and MRI. Eventhough it is less specific for soft tissue pathology, ultrasonography is suitable for initial examination due to its low cost, quick and easy implementation.

Surgical management of the parotid gland lipoma is the same as for any other benign tumor with intraglandular location, consisting of superficial parotidectomy and preservation of the facial nerve. We applied the same surgical approach in the currently presented case, as all the branches of the facial nerve were meticulously dissected and preserved. No postoperative morbidities like Frey's syndrome or facial nerve palsy were found within the first postsurgical days and thereafter.

Conclusion

Due to the very similar tumor behavior to other neoplasms, clinical examination, as a sole diagnostic method, is absolutely insufficient to identify parotid gland lipoma. Ultrasound, CT scan and MRI are indicated to further establish the correct diagnosis. Although the tumor is non-aggressive and does not give functional disturbance, surgical removal is needed in order to avoid significant enlargement.

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