Lipoma Of The Parotid Gland

Case Report

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ABSTRACT

Introduction: Lipoma of the parotid gland is rare in the head and neck region. It is a soft tissue benign tumor originating from areas composed of fat. Occurrence of lipoma is often sporadic and rarely inherited

Case report: A 74 year old male presented with a left sided neck swelling which was gradually increasing in size over a duration of 10 years. It was associated with intermittent pain 6 months prior to presentation.

Discussion: Lipoma is the commonest benign mesenchymal tumor and is a relatively uncommon presentation in the head and neck region. Often a fine needle aspiration cytology is able to indicate the presence of a lipoma. However, with the computed tomographic scan, the level of attenuation is able to indicate the presence of a lipoma. Although benign, there are reports of malignant transformation to a liposarcoma.

Conclusion: Lipoma of the parotid gland is often mistaken for other tumors hence an accurate clinical assessment together with preoperative imaging and histopathological examination helps to facilitate the diagnosis.

Key Words: Head and neck, lipoma, liposarcoma, parotid gland tumor

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INTRODUCTION

Lipoma is the commonest mesenchymal tumor with only about 25% of lipomas and their variants originates from the head and neck region, where they account for 0.1%-0.5% of all benign tumors[1]. Most lipomas grow insidiously and usually asymptomatic. It may cause localised mass effect to surrounding structures. The occurrence of lipoma is usually sporadic and rarely associated with inherited disorder such as hereditary multiple lipomatosis, Gardner's syndrome or Madelung's disease. The incidence of parotid gland lipoma was reported between. 0.6% to 4.4%[2] with male predisposition and often occur at the age of 40 to 60 years old[3]. Diagnosis is often based on clinical examination, radiological imaging and histological confirmation.

Case report

A 74-year old male presented with a left parotid swelling gradually enlarging over 10 years duration. In recent 6 months, he developed intermittent pain over the swelling that was not associated with food intake. There was no facial asymmetry nor obstructive symptoms associated with the swelling. There were also no otological complaints. Upon examination, there was a left parotid swelling measuring 10cm x 7 cm with normal overlying skin. It was soft to firm in consistency, non-tender, well circumscribed and mobile on palpation. There were no palpable cervical nodes. Intraoral as well as flexible nasopharyngolaryngoscope (FNPLS) examination showed no medialization of the lateral pharyngeal wall. A fine needle aspiration cytology of the swelling was reported as low to moderate cellularity showing sheets and clusters of fat cells, peripherally situated nuclei and scattered stromal fragment with no cellular atypia or malignant cells consistent with adipocytic tumor. The computed tomography of the head and neck showed a large well defined encapsulated homogenoous hypodense mass within the superficial lobe of the parotid measuring 8cm x 4cm x 7cm with an attenuation value of approximately -100HU representing fatty component (Figure 1). He underwent a superficial parotidectomy with preservation of facial nerve. The surgery was uncomplicated. Intraoperatively, the tumor occupying the superficial lobe of the right parotid gland which was well encapsulated measuring 7.5cm x 8.0cm. There was also presence of a preauricular node measuring 0.5cm x 1cm and level II node sizing 2cm x 1 cm. Histophathological report of the parotid gland showed univacuolated adipocytes separated by thin fibrous septa (Figure 2) confirming lipoma and section of the lymph node showed lymphoid follicles with no evidence of malignancy. Patient recovered well and showed good recovery with no recurrence.

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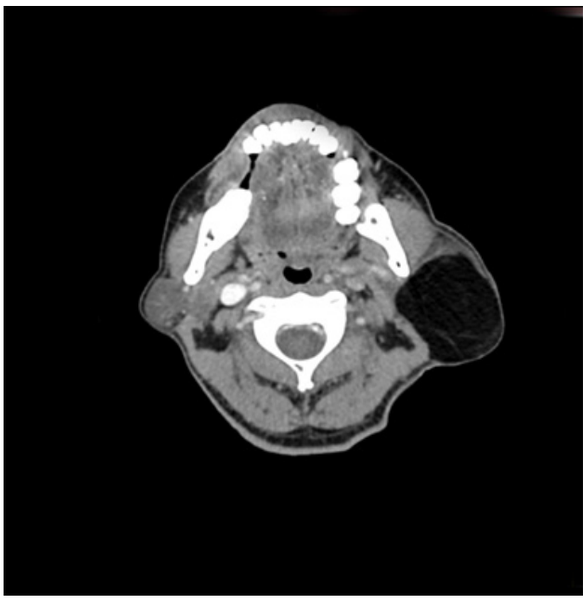

Fig. 1: Large hypodense fatty mass at the left parotid gland with thin enhancing septations within the mass.

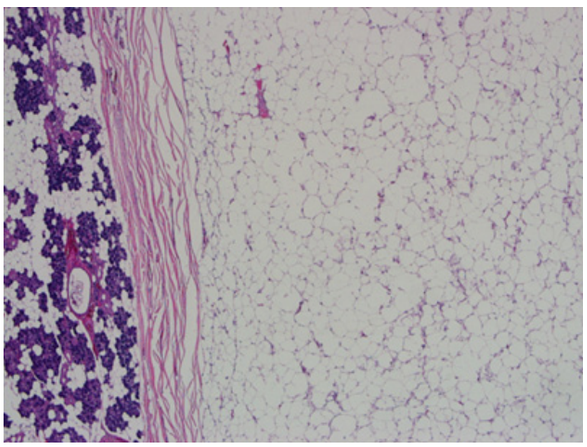

Fig. 2: A well-circumscribed tumour with fibrous capsule composed of lobules of uniform mature, univacuolated adipocytes rimmed by salivary gland parenchyma.

DISCUSSION

Lipomas is the commonest benign mesenchymal tumors of the soft tissue and relatively uncommon in the head and neck. 13% of the head and neck lipomas occur subcutaneously and are commonly located at the posterior neck[4]. It can either be single or multiple. Recent classification of benign lipomatous tumors includes; classic lipoma; lipoma variant; hamartomas and hibernoma[5]. Lipoma often exhibits slow growth, benign fatty tumors which are soft, lobulated and encapsulated. Clinically, it is usually painless swelling and a characteristic "slippage sign" can be elicited. They are composed microscopically by adipose tissue arranged in lobules with no cellular atypia and surrounded by a fibrous capsule. Malignant transformation of a lipoma to a liposarcoma is rare[6]. Lipomatous lesion of the parotid gland is rare and seldom considered as an initial diagnosis in parotid gland swelling. The occurrence of parotid gland lipoma ranges from 0.6% to 4.4% in the general population[7]. Rarer still is lipoma arising from the deep parotid gland with only a few cases reported so far[7]. The availability of ultrasound, computed tomography (CT), magnetic resonance imaging (MRI) and fine needle aspiration cytology (FNAC) examination has provide an accurate assessment of these tumors and a rational approach to the management of such case.

Preoperative imaging for a case of lipoma usually comprises of either an ultrasonography, CT or an MRI scan. It plays a crucial role in diagnosing the nature of the lesion and its extension. In ultrasonography, we can find a hyperechoic mass that is adjacent to muscles and contains a linear, echogenic lines at right angles to the beam. However, some may be hypoechoic or isoechoic hence it is less pathognomonic as compared to other scans. Lipoma on CT scan has a characteristic appearance. Fat is the only soft tissue that has density less than water and has a negative CT attenuation. Thus, most lipomas appear as a homogenous mass with few septation with a low computed tomographic attenuation between -50 and -150 Hounsfield Units and no contrast enhancement[8]. Whereas, MRI scan with multiple sequences are able to exhibit high signal intensity in T1 images and are more advantageous in diagnosing lipoma.

In cases of swelling of the head and neck, the preferred diagnostic option is to obtain a fine needle aspiration cytology (FNAC) examination. FNAC is non-surgical and the procedure is readily repeatable if needed with less risk of seeding. FNAC of a lipoma is often reported to have lobulated adipose tissue with thin capillaries transversing the lobules and some thick walls[9]. A study by Einarsdóttir *et al*, 2004 reported that FNAC is highly accurate for the diagnosis of lipomatous tumors with 96% accuracy for lipomas[10].

There is a separate variant of lipoma called atypical lipoma that is synonym to liposarcoma because they are identical based on the morphology and karyotyping. It has been mentioned that lipomas that are seated in the deep space of the head and neck region should be regarded as well differentiated liposarcoma[11]. Most benign lipomatous lesion are well encapsulated and liposarcoma must be considered when invasion is detected during dissection. Studies show that histologically, deep tissues have a higher rate of unresectable aggressive local recurrence hence lead to the classification of a well differentiated liposarcomas[11]. Liposarcomas is the most common soft tissue sarcoma comprising of 20% of all mesenchymal malignancies[12]. The World Health Organisation (WHO) had classified liposarcoma into 4 distinct types namely well differentiated, myxoid, pleomorphic and undifferentiated. Unlike epithelial neoplasm, benign soft-tissue tumors

rarely undergo malignant transformation. In particular, liposarcoma which is considered occurring de novo rather than due to transformation from a benign lipoma but recent molecular and genetic studies in lipomatous tumors have suggested that a benign lipoma has a biologic potency for transformation into well differentiated liposarcoma[13]. Although it is reported that well differentiated liposarcoma have a relatively benign clinical course, they have high rates of local recurrence with potential for delayed dedifferentiation and subsequent risk of metastasis[14, 15].

Numerous approaches have been mentioned in a case of parotid lipoma and much discussed amongst surgeons. According to the English literature, the surgical procedures reported are superficial parotidectomy, partial excision of the inferior part of the parotid gland, extracapsular dissection and near total parotidectomy in cases with parapharyngeal extension[3]. In many cases, the surgery was performed for its aesthetic values and also for functional discomfort caused by the increasing size of the tumor. The average duration between the discovery of the lipoma and the surgical excision is about 1-3 year. Apart from that, it is preferable not to postpone the surgery for too long as local mass effect may complicate with facial nerve palsy or even airway obstruction if parapharyngeal space is involved. The preferred surgery is a superficial parotidectomy with facial nerve preservation[16] as it allows a better clearance of the tumor with lesser risk of recurrence. However extracapsular excision may be offered if lipomatous is small and is superficially located but carries a risk of recurrence if the excision margins is not clear . As discussed above, a liposarcoma of the head and neck regions is uncommon with parotid involvement becoming extremely rare with only few reported cases[17]. In cases of liposarcoma, because of the propensity for local recurrence and risk of dedifferentiation, a total parotidectomy with preservation of facial nerve is advocated.

CONCLUSION

Lipoma of the parotid gland can often be mistaken for other tumors of the head and neck. An accurate clinical assessment is required followed by preoperative imaging and histopathological examination to facilitate in the diagnosis of parotid gland lipoma. Parotidectomy and preservation of facial nerve is advocated upon diagnosis of parotid gland lipoma. This is to avoid complications such as discomfort, localized mass effect and aesthetic distortion. Variants of atypical lipoma or liposarcoma has the propensity to dedifferentiate hence a total parotidectomy with facial nerve preservation is advisable.

CONFLICT OF INTEREST

There are no conflict of interest.

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