CASE REPORT

Parietal peri-neural lipoma: a case report

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Abstract

Background: Perineural lipoma, also known as fibro-fatty overgrowth, fibrolipomatous hamartoma, intraneural lipoma, and lipomatous hamartoma, is a rare, benign, congenital lesion most commonly found in the median nerve, usually at the level of the wrist or hand. To our knowledge, no published cases report a perineural lipoma arising from the intercostal nerve.

Case presentation: We report a case of a perineural lipoma in a 55-year-old man which was totally resected. The diagnosis was based on microscopic examination which showed a benign fatty tumor composed of mature fat cells interspersed with fibrofatty connective tissue. This tumor surrounded numerous hyperplastic nerve bundles.

Discussion: Perineural lipoma is a benign condition with non-specific symptoms. In fact, they depend on the concerned nerve. Surgical resection seems to be necessary only in symptomatic patients because of its high morbidity.

Key words

Perineural lipoma, Intercostal nerve

1 Background

Perineural lipoma is a rare and benign lesion which was initially reported in 1953 [1]. It is also known as a fibrofatty overgrowth, fibrolipomatous hamartoma, intraneural lipoma, and lipomatous hamartoma [1, 2]. This lesion is usually unilateral and has no known genetic component. It is believed to be of congenital origin [3]. Median nerve is the most frequently concerned but other sites such as the radial, ulnar, sciatic, pulmonary and plantar nerves have also been reported [4-7]. To our knowledge, no published cases have been reported involving the intercostal nerve.

2 Case presentation

A 55-year-old man presented with a 3-year history of a posterior thoracic mass that was increasing in size. This mass was painful. Physical examination showed a 4-cm firm mass which was adherent to the deep tissue and was situated next the external edge of the scapula. The CT-scan revealed a 6 cm × 3 cm fatty mass associated with a tissular component. The adjacent intercostal muscle and the pleura were thickened (see Figure a). Surgical exploration showed a non-specific lesion which adhered to the posterior arch of the third rib. The total resection of the mass was performed. Macroscopically,

the mass was grayish and adhered to the rib arch. Histological examination revealed a benign fatty tumor composed of mature fat cells interspersed with fibro-fatty connective tissue. This tumor surrounded numerous hyperplastic nerve bundles (see Figure b). The histological features were consistent with parietal perineural lipoma. The patient hasn't presented recurrences since one year of follow-up.

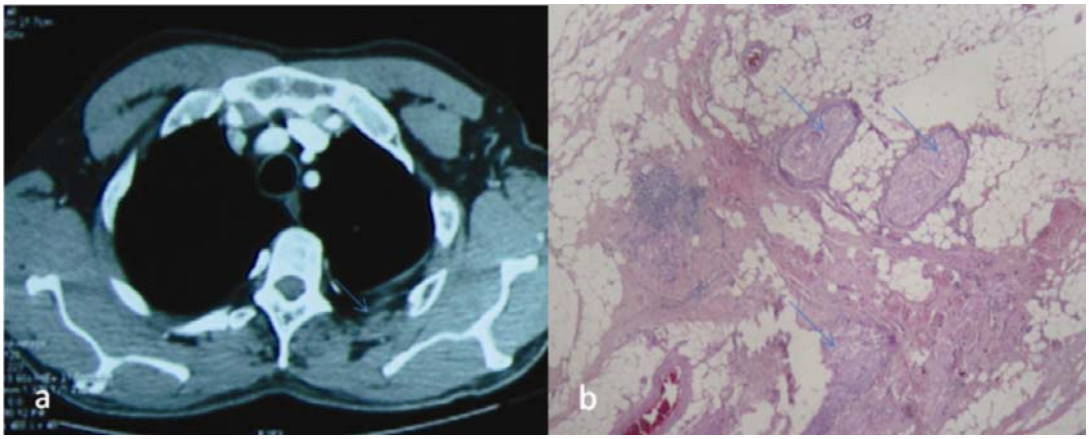

Figure. a. CT-scan showing a 6 cm × 3 cm fatty mass associated with a tissular component. The adjacent intercostal muscle and the pleura were thickened. b. fatty tumor composed of mature fat cells interspersed with fibrofatty connective tissue. and surrounding numerous hyperplastic nerve bundles showed with the arrow (HE ×250)

3 Discussion

Perineural lipoma is a rare benign lesion characterized by fibro-fatty proliferation causing epineural and perineural fibrosis with fatty infiltration around nerve bundles [3]. Varying descriptions have been applied including lipofibromatous hamartoma, intraneural lipoma, fibrolipoma of nerve, fatty infiltration of nerve, fibrofatty infiltration of nerve and nerve lipoma [1, 3]. In 73% of the cases, the tumor was dependant on the median nerve [8, 9]. The involvement of other peripheral nerves was described such as the radial, ulnar, sciatic and plantar nerves. To our knowledge, no cases have been reported in the intercostal region.

Symptoms are non-specific depending on the affected nerve including carpal tunnel syndrome or slow-growing painless lump in the wrist or hand in case of lipoma of the median nerve [10]. In our case, the symptoms consisted in a painful parietal growing mass associated with axillary adenopathy. The gold standard for investigation is MRI. The pathognomonic appearance is that of low signal nerve bundles surrounded by high signal fibrolipomatous tissue on T1-weighted images, also called the cable sign [11]. No other tumors have been found to have similar MRI characteristics [12]. The CT scan shows non-specific findings like in our case but seems very useful in order to rule out a malignant disease. Besides, MRI isn't always possible because of its cost effectiveness, especially in low income countries. Even if a nerve tumor has a characteristic appearance on MRI imaging, the diagnosis remains based mainly on microscopic examination.

Management of perineural lipoma can be conservative or surgical. Surgical resection, like in our case, is controversial and is only recommended for symptomatic lesions [3].

4 Conclusion

Perineural lipoma is a benign condition that does not become symptomatic until it has been present for many years. Its symptomatology is non-specific and depends on the concerned nerve. Surgical resection seems to be necessary only in symptomatic patients because of its high.

Consent

Written informed consent was obtained from the patient for publication of this Case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests

The authors declare that they have no competing interests.

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