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Myofibroblastic Tumours; A Case Report of Nodular Fasciitis

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Author's contribution

The sole author designed, analysed, interpreted and prepared the manuscript.

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Case Study

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ABSTRACT

Aims: Nodular fasciitis (NF) is a benign, reactive proliferation of fibroblasts in the subcutaneous tissues and commonly associated with the deep fascia. It is caused the lesion to be misdiagnosed as sarcoma due to this fibroblastic proliferation. Early surgical excision can be performed for both diagnostic and therapeutic purposes. So we can save the patient from both misdiagnosis and latent malignancy. In this report, we presented slower-growing NF on the chest wall according to in oral cavity.

Presentation: A 37-year-old female patient had chest pain and dyspnea. A mass of 2 cm in diameter was detected and removed on the chest wall. She was discharged early period after the operation.

Discussion: Nodule is most commonly seen single, solid and palpable. Curative excision can be performed in both diagnostic and treatment. The recurrence rate is around 1% from it. If it would relapse, the diagnosis should be revised.

Keywords: Solitary nodule; chest wall; nodular fasciitis.

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1. INTRODUCTION

Nodular fasciitis is most commonly seen between the ages of 30 and 50 but rarely occurs in children. Men and women are equally affected. It may be seen in the upper extremities, the head, the neck, especially the forearms. The thorax is the second most commonly affected. The occurrence of lesion and growth time is ranged three days to two years. While more than half of the lesion rapidly grows in the first month in the oral cavity. It grows relatively slowly in other locations of the body [1]. Histopathologically, myxoid, cellular and fibromatous types have been described. It is called as pseudosarcomatous fibromatosis too [2]. Diagnosis should be made carefully for it may be confused with sarcoma [3].

2. CASE REPORT

Our patient was a 37-year-old female. She was admitted to the Dermatology Clinic with a 2-cm swelling in her chest, which had continued for six months. The diagnosis could not be made by an ultrasound-guided fine needle biopsy performed in this clinic. Therefore, the patient was referred to our clinic. It was learned from her medical history that she smoked about two packs of cigarettes a day and had a minor trauma ten months ago. Physical examination revealed a hard, immobile and limited mass between the right second rib and clavicle. There was a decrease in bilateral respiratory sounds. In radiological examination; MRI showed an encapsulated mass of approximately 2 cm in diameter and regular borders (Fig. 1). As a result of chest diseases consultation, COPD was diagnosed, and treatment was started. Two days later, from medical treatment, a mass wich with good arterial blood supply was removed from the anterior region with light sedation and local anaesthesia. Macroscopy of the material: It consists of seven soft materials with the most significant size being 2x1.5x1 cm, the smallest with a diameter of 0.4 cm, and the largest with a thickness of 0.4 cm and the smallest with a thickness of 0.3 cm.

Microscopy of material: Uniform structure and immature-appear fibroblasts and myofibroblasts can be seen. These separated from surrounding tissues with a relatively smooth border and slight pleomorphism of spindles cell which extend in different directions and from exclusive fascicular bundles. There are mitotic activities, but the activity does not include any atypia. Occasionally different vascular structures and bleeding traces can be seen. It was reported as nodular fasciitis (NF) (Fig. 2a-b). The patient is still under our observation.

3. DISCUSSION

NF is a rare benign reactive fibroblastic proliferation. Although it grows fast, it usually does not cause pain. NF lesions are usually less than 3 cm in size. In our patient, the lesion was seen to grow in a short time. The cause of NF is unknown. However, less than 15% of cases were associated with trauma [4]. Recent studies have demonstrated the presence of the USP6 activation in nodular fasciitis [5]. Our patient had a history of trauma, but no genetic analysis was performed.

It was seen that nonspecific findings are detected by MRI or computed tomography (CT), and therefore it was challenging to diagnose with imaging methods [6]. The diagnosis must be confirmed histopathologically. In the pathological examination, it appears as a vascular tumour with lymphocytic infiltration and high thin-walled capillaries with irregular bundles of immature fibroblasts and myofibroblasts within the myxoid stroma. Failure to follow the pattern of cellular atypia and mitotic regularly is essential in differentiation sarcoma [7,8]. In particular, it should be distinguished from sarcoma, myofibroma, neurofibroma, fibrosarcoma, solitary fibrous tumour, fibromatosis, and fibrous histiocytoma. The surgeon and pathologist share age of the patient, clinic (history of trauma, if any), location of the lesion, relationship with surrounding tissues during surgery, radiology, and duration of symptoms, making diagnosis easier [1-3]. Our case was reported as a nodular mass on MRI, and the definitive diagnosis was made histopathologically.

For the definitive diagnosis of nodular fasciitis, excisional biopsy may be required when 100% diagnosis cannot be made by fine needle biopsy [9]. It was performed in our patient, but surgery was performed because the diagnosis could not be made. Therefore the recommended treatment is complete resection. The local recurrence rate after resection in NF is approximately 1% [10]. NF, which is a benign lesion, should be kept in mind in the differential diagnosis of rapidly growing masses [11,12] The patient should be followed up after surgery.

Although spontaneous regression has been reported in the mouth, it had been not described

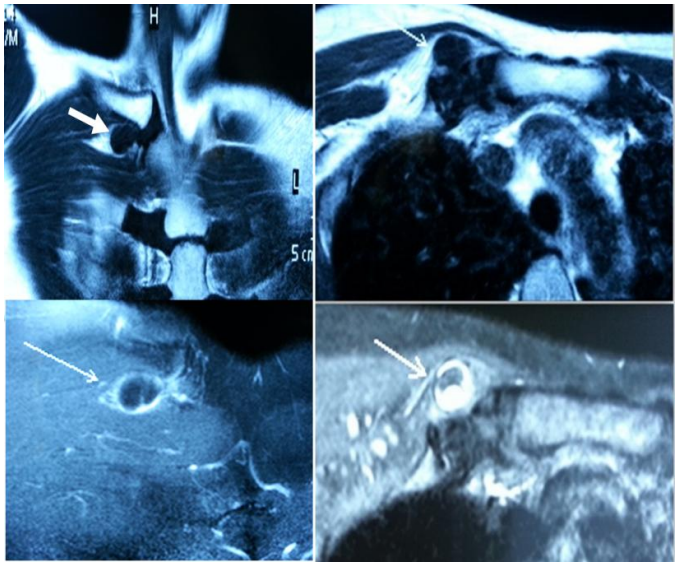

Fig. 1. In T1- and T2-weighted images of the coronal and coronal section on MRI, the round mass is upper the first costa and the sternum and, under the pectoralis major

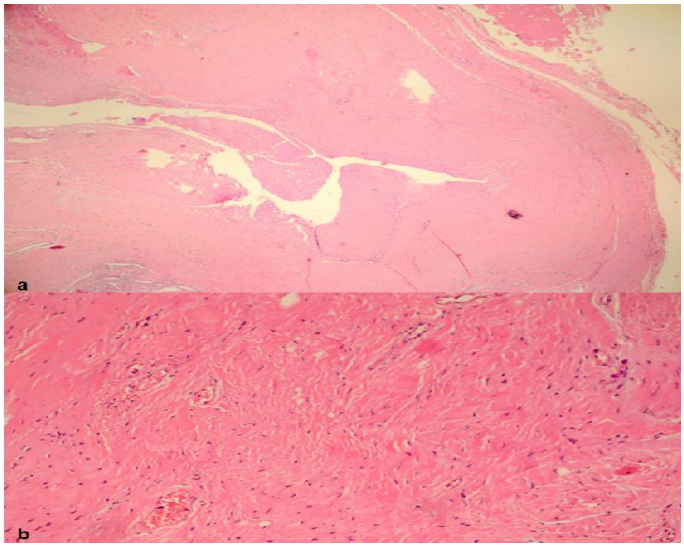

Fig. 2a. Figure shows fibroblastic proliferating lesion separated from surrounding tissues with relatively smooth border. (H-E, 4X10) 2 b: Lesions of spindles with moderately cellular spindle showing a slight pleomorphism of sphincter cells, extending in different directions and from characteristic fascicular bundles. Occasionally different vascular structures and bleeding traces. (H-E 10X10)

on the chest wall [3]. Chemotherapy and radiation therapy are not indicated after surgery. If it recurs, the diagnosis should be reviewed [13,14].

4. CONCLUSION

If there is a mass that grows very fast in about six months, NF should come to mind. Early surgical excision can be performed for both diagnostic and therapeutic purposes. So we can save the patient from both misdiagnosis and latent malignancy.

CONSENT

It is not applicable.

ETHICAL APPROVAL

It is not applicable.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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