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Case Report

An Unusual Presentation of Anterior Abdominal Wall Neurofibroma

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ABSTRACT

Background: Neurofibroma is a benign tumour of the peripheral nerve sheath characterized by proliferation of Schwann cells, perineural cells and endoneurial fibroblasts. Different types of Neurofibroma can be identified, including localized, plexiform, and diffuse types. Solitary Neurofibromas are benign tumours, often the manifestation of neurofibromatosis, and reflect a hereditary pathology with several variants. The clinical manifestations of solitary Neurofibromas change according to their location and can generate a variety of symptoms. Usually, solitary Neurofibromas are located in the skin and rarely in other places. Surgical removal is the only treatment; malignant transformation and recurrence are unusual. Objective: A case is reported of solitary neurofibroma in the abdominal wall of a 35-year-old patient without neurofibromatosis. Conclusion: The Solitary Neurofibroma is one of the rare possibilities of anterior abdominal wall tumour. And it can be treated with wide excision and reconstruction with mesh or proline darting and coverage with graft or flap.

1. Introduction

Schwanoma, Neurofibroma and neurogenic sarcomas represent three presentations of neural sheath tumours. Nearly 90% of the tumours are benign, and 10% have multiple locations. Neurofibroma can be distinguished as the localized, plexiform, and diffuse types. Although Neurofibromas are common in neurofibromatosis, that pathology must not be immediately concluded when finding one of these tumours, since occasionally solitary Neurofibromas can be found .The association between solitary Neurofibromas and neurofibromatosis has not yet been established [[1][2][3][4][5][6]].Solitary Neurofibromas are solid, well-circumscribed, differentiated and nonencapsulated tumours that tend to grow slowly in the skin of people between 20 and 30 years of age, and present without sex differences. With ultrasonography imaging, Neurofibromas appear as smooth, well-defined and lobulated masses; with computed tomography (CT), they have a homogeneous, smooth and round appearance and often contain multiple cystic spaces caused by myxoid

degeneration. Histopathology examination, the tumour is composed of elongated, spindle-shaped cells with round or fusiform nuclei and eosinophilic cytoplasm within a loose matrix of fine fibrillary collagen. Malignant transformation is unusual.

The treatment of large Neurofibroma consists of complete surgical excision.

CASE HISTORY:

A 35-year-old male presented with bulging lobulated mass below umbilicus. It was first observed before 2 months, and it had rapidly increased in size since then. Physical examination revealed a soft 20 × 22 cm multilobulated mass with ulceration associated with bleeding on touch and it was fixed to the abdominal wall [Figure [1]]. At first impression it was looking like a malignant mass. The cutaneous examination was unremarkable and there was no other swelling .No important findings appeared in the personal or familial histories. Ultrasonography was done which was suggestive of highly vascular tumour. Computed tomography (CT SCAN) Figure [1]] revealed large mixed enhancing lesion involving lower anterior abdominal wall with Para-aortic and pelvic lymph nodes raising possibility of neoplastic aetiology. We took biopsy which was inconclusive. So wide circular incision around mass was taken followed by excision of mass [Figure [1]] with part of rectus sheath.Intra operatively no evidence of involvement of muscle or peritoneum. Pre-peritoneal prolene darting of defect in rectus sheath was done and raw area was covered with split thickness skin graft. The pathology showed spindle cells with wavy, pointed nuclei arranged in fascicles, storiform pattern and whorled pattern s/o Neurofibroma with ulceration and granulation tissue [Figure [2]].Post operative was uneven full and at follow up after 6 month there was no evidence of recurrence.

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3. DISCUSSION

In a patient with a superficial mass in the abdomen, the following alternatives must be considered in differential clinical diagnosis which includes abscesses, benign and malignant tumours originating from muscle, nerve or fat tissue, and lymphatic regional nodes. A complete history and physical examination are important in difficult cases; imaging and histological studies can be used to guide diagnosis. Abdominal neurogenic tumours are most commonly located in the retro peritoneum, particularly in the adrenal glands. The urinary bladder, the abdominal wall, and the gall bladder can also be involved. Making a definitive pre-surgical diagnosis is very difficult and requires microscopical differentiation. When a diagnosis of solitary Neurofibroma is made, other subclinical forms of neurofibromatosis must be excluded as well as to confirm that the mass was solitary. The current case presentation seems to be the unusual report of a case of solitarily Neurofibroma in the abdominal wall of a patient without neurofibromatosis. Other cases of solitary Neurofibroma in patients without neurofibromatosis have been reported in body regions with slightly less frequency. These include the nasal cavity, palatine tonsil, soft palate, subglottical, cervical mass, intramedullary, on the common bile duct, kidney, ileum, colon, anal canal, spermatic cord, scrotum [7] and vulva[8].

4. CONCLUSION:

The Solitary Neurofibroma is one of the rare possibilities of anterior abdominal wall tumour. It can be treated with wide excision and reconstruction with mesh and coverage with graft or flap.

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