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Original Research Paper

General Surgery

NODULAR FASCIITIS;A CHALLENGING DIAGNOSIS: A RARE CASE REPORT

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ABSTRACT

INTRODUCTION: Nodular fasciitis is a soft tissue lesion found in the superficial fascia.Also known as Pseudosarcomatous fasciitis is a rare diagnosis but may present clinically as soft tissue sarcoma.

CASE PRESENTATION: A 42 yr old male with an ulceroproliferative growth over left shoulder progressively growing, non tender,base fixed to underlying structures,no axillary lymphadenopathy.Chest Xray was normal.MRI shoulder shows a vascular growth fixed to the deep fascia.Wedge biopsy showed spindle cell tumor.Patient went Excisional biopsy which revealed Nodular Fasciitis.

DISCUSSION: Nodular fasciitis is a reactive proliferation mimicking sarcoma commonly involving upper limb,head-neck and trunk and even oral cavity.Can occur equally in both sexes with common age of presentation between 20-40 yrs.

CONCLUSION: Nodular fasciitis presents as a subcutaneous swelling but can rarely present in an ulceroproliferative growth, and thus in any such growth nodular fasciitis can be a diagnosis.

KEYWORDS : Nodular Fasciitis,Soft tissue sarcoma,Excisional biopsy,Differential diagnosis.

INTRODUCTION:

Nodular fasciitis is a benign soft tissue tumor of fibroblastic differentiation also known as Pseudosarcomatous fasciitis and Subcutanous Pseudosarcomatous fibromatosis and was firstly described by Konwaler et al in 1955[1].It usually starts as a subcutaneous firm painless swelling that grows rapidly over the course of time. The etiology is yet not fully established[2] but it is known to be a self limited neoplastic proliferation of fibroblasts.It is a solitary lesion and occurs equally in both men and women. The common age of presentation is 20- 40 years[3]. It can occur at any site including the oral cavity but occurs most commonly at forearm(25-30%), head and neck(20-25%),trunk(20-22%) and lower limbs(10-15%) and rest at other sites including the mouth[3]. Its clinical importance lies within the fact that it mimics clinically as soft tissue sarcoma. If large can cause various mass effect including paraesthesia, diminished pulse, immense pain or local necrosis.

CASE PRESENTATION: A 42 year old male came to Surgery OPD at RIMS Ranchi with a 6 month old history of a painless ulceroproliferative growth over his left shoulder. This initially had started as a subcutaneous lump which gradually enlarged over the course of illness and ulcerated for last 2 months. Onset was insidious and it was growing rapidly.On examination, there was an ulceroproliferative growth over his deltoid area about 15x10 cm in size, margins regular , non tender,firm in consistency and base fixed to the underlying structures and having mild discharge with fleshy component protruding.Movement at shoulder joint was normal and there was no axillary lymphadenopathy. Chest auscultation was normal. All routine blood tests was unremarkable.Chest Xray was normal.MRI of the shoulder showed a vascular growth in soft tissue adhered to the deep fascia. Muscular attachment was not noted. It appeared isointense on T1 weighted image and hyperintense on T2 image. There were no isolated feeder found although the mass was hypervascular.Wedge biopsy showed spindle cell tumor. Patient was prepared for surgery and Wide Local Excision was done under general anaesthesia. Intraoperativley the mass was adhered to the deep fascia and at some places to the muscles. It was profusely bleeding which was secured by diathermy.The tumor was completely excised taking a margin of 2 cm and removing all the deep fascia affected with a cuff of deltoid underlying to the mass. Mass was sent for histopathologic examination which showed fibroblasts with connective tissue stromal cells arranged in a random manner as loose bundles with spindle cells suggestive of Nodular Fasciitis. Following excision, primary closure couldn't be achieved so split skin grafting was done. On post op day 5, dressing of the wound was done, and there was about90% take up of the graft. Patient was discharged on post op day 7.

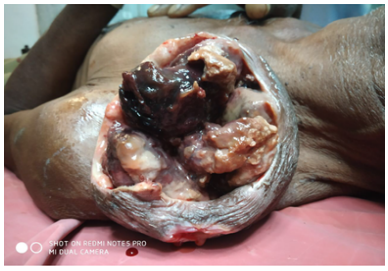

Figure 1. Showing An Ulceroproliferative Growth Present Over Left Deltoid Area.

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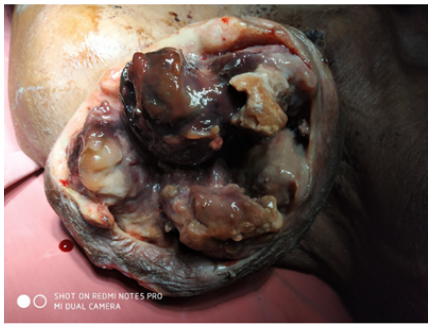

Figure 2. Showing A Close Up View Of The Growth Having Fleshy Component Protruding Along With Slough; Margins Are Also Clearly Seen.

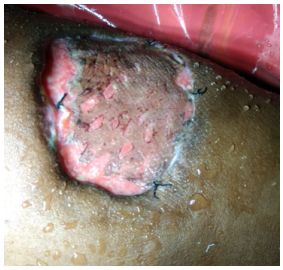

Figure 3. Post Op Day 5 Showing The Excised Area With A Split Skin Graft Having Approx 90% Uptake

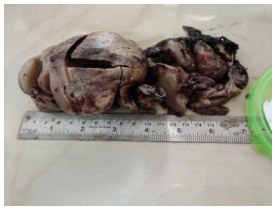

Figure 4.showing Specimen Excised And Its Size During Preparation Of The Slides And Block.

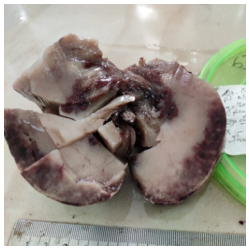

Figure 5. Showing Cut Section Of The Specimen.

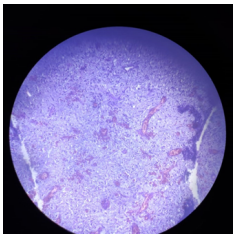

Figure 6. Low Power 10x Magnification Of The Slide Prepared From The Excised Specimen Showing Cellular Proliferation Having Basophilic Staining.

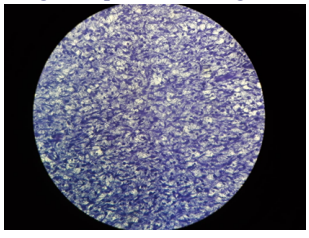

Figure 7.high Power 40x Magnification Showing Basophilic Stained Proliferated Fibroblasts.

DISCUSSION:

Nodular Fasciitis is a benign reactive self limited tumour formed due to proliferated fibroblasts[1]. Most of the growth are solitary and occurs predominantly between 20-40 years of age with no sex predisposition, thus occurring in both males and females equally. It can although occur in any part of the body but most commonly found over forearm, followed by head and neck, trunk and lower limb[3]. Some uncommon sites like oral cavity and floor of mouth had been also documented[4]. Although it is a well defined tumor but can be locally invasive tumor[5]. Most of the cases arise from the fascia, either superficial or deep[6]. The main differential diagnosis of the condition is soft tissue tumor[7].Imaging like MRI and HPE of the tissue is the main component of the investigation battery done in this case which gives the diagnosis. HPE will show differentiated proliferation of the fibroblasts on the background of cellular stroma. MRI will show vascular growth mostly free or minorly attached to some fibres of underlying muscles, and appears isoechoic on T1 image and Hyperechoic on T2 image. Immunohistochemistry can be done if available.

Differential diagnosis includes all soft tissue sarcoma including fibrosarcoma, rhabdomyosarcoma, spindle cell sarcoma, myxoid sarcoma, synovial sarcoma if attached to the joint capsule. Treatement generally includes Wide Local Excision with some margin(1 cm in my case). Recurrence can occur but is usually rare.

CONCLUSION:

Nodular Fasciitis is often misdiagnosed as soft tissue sarcoma due to its morphologic features and vascularity and is very challenging diagnosis to be made clinically. This entity should be considered as a differential diagnosis in every cases of soft tissue sarcoma and should be focussed by all surgeons and clinicians including all Histopathologist colleagues. Thus all cases those are clinically suspicious of soft tissue sarcoma should be thoroughly investigated including MRI, CT Thorax and Histopathologic examination of the tissue with immunochemistry if possible. Also if proven, Nodular fasciitis should be excised with a mandatory followup.

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