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Calcified lupus panniculitis: An interesting incidental imaging finding in a chronic SLE patient on medication for years

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Abstract

SLE is a chronic autoimmune disorder which can involve any organ of the body. Musculoskeletal manifestations are extremely frequent in these types of patients. Lupus panniculitis is a rare manifestation of SLE presenting as hard tender asymmetric nodules involving mainly the head and neck region and upper limbs and rarely the buttocks. We present a case of Calcified Lupus Panniculitis from a radiological perspective. A 40 year old female patient was sent to Radiology department from Dermatology Department with complain of a intermittent discharging sinus tract on the lateral aspect of her Rt gluteal region and also a hard feeling over her buttocks for a couple of years. She is a patient of chronic SLE who is on medications for the past 15 years. We first took relevant clinical history and then we evaluated for the sinus/ fistulous tract and the hard swelling over the buttocks. We first took an abdominal Skiagram, followed by ultrasonography and computed tomography of the affected region. The abdominal Skiagram showed extensive calcifications in the bilateral gluteal regions which was confirmed on ultrasonography and computed tomography. We illustrated that in a chronic SLE patient despite being on medications for years lupus panniculitis wasn't controlled, rather it got worsened and further calcified.

Keywords: SLE, lupus panniculitis

Introduction

SLE is a disease that can affect any age group, any sex and virtually any organ of the body but preferentially affects women in reproductive age group.it is an autoimmune disorder having general symptoms of fever, malaise, arthralgia and fatigue being the most frequent constitutional symptom. It has an autoimmune potential causing microvascular inflammation by producing various autoantibodies. These patients most commonly present as symmetric poly arthralgia involving the small joints. Lupus panniculitis commonly manifests as a variant of chronic cutaneous type of SLE (erythematosus variant) involving face, arms shoulders and rarely buttocks.

Case report

A 40 year old female patient was sent to Radiology department from Dermatology Department with complain of an opening of a sinus tract with intermittent serous discharge on the lateral aspect of her Rt gluteal region and also a hard feeling over her buttocks for a couple of years. We first took relevant clinical history and then took an abdominal and chest skiagram, followed by ultrasonography and computed tomography of the affected region to rule out any abscess or sinus tract due to chronic osteomyelitis. The patient is known to have SLE for the past 10 years and has been on medications such as high dose of glucocorticoids and chloroquine since then. Majority of her symptoms related to SLE were well controlled on medications except her typical butterfly rash on her cheeks (Figure 6), and a new onset sinus tract on her right gluteal region along with a hard feeling over her both buttocks which gradually appeared over past few years and was increasing in size. The abdominal skiagram shows extensive linear reticular calcifications over the bilateral iliac and gluteal regions (Figure no 1); whereas the chest radiogram showed no evidence of soft tissue calcifications in the chest wall (figure no 2). Then ultrasound showed multiple reticulonodular echogenic foci with posterior acoustic shadows in the superficial plane with complete obscuring of the deeper structures (Figure no 3). No features of acute inflammation was seen in ultrasonography. Non contrast Computed Tomography shows extensive linear reticular calcifications in bilateral gluteal subcutaneous fat (Right>Left) and very little calcifications in both inguinal subcutaneous fat, there is an additional sinus tract in the lateral aspect of Rt gluteal Region in the subcutaneous plane which has ended blindly in that plane with no penetration into deeper structures or underlying bones(figure 4&5).There is no bony abnormalities or features of chronic osteomyelitis as suspected due to the coexisting presence of a sinus tract.

Photos and Figures

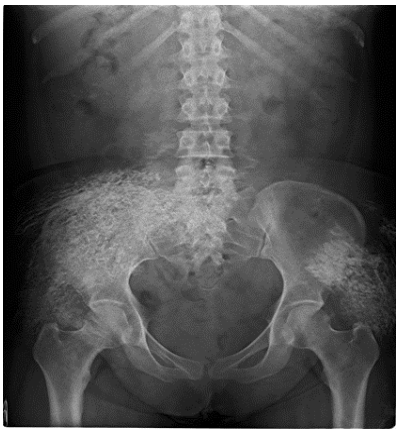

Fig 1: shows plain abdominal radiograph revealing extensive linear reticular calcifications over bilateral iliac and gluteal regions.

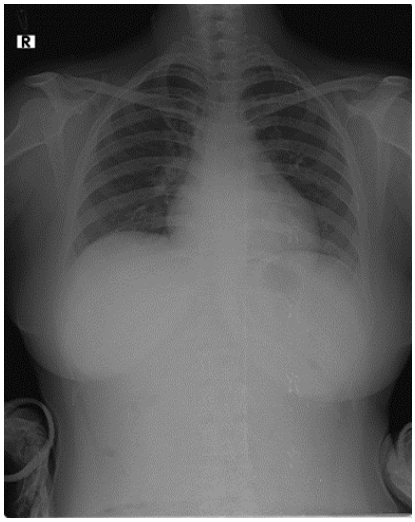

Fig 2: Shows normal chest radiogram with no evidence of soft tissue calcifications in the chest wall

Fig 3: Shows diffuse calcifications noted in the subcutaneous tissue of the affected region with dense posterior acoustic shadowing.

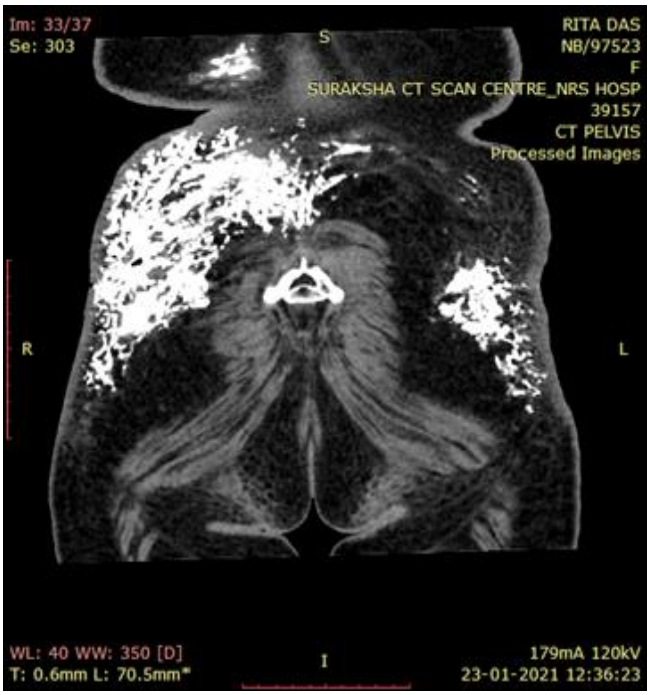

Fig 4: Shows extensive linear reticular calcifications in bilateral gluteal subcutaneous fat (Rt>Lt) and both inguinal subcutaneous fat. In FIGURE 5 there is an additional sinus tract in the lateral aspect of Rt gluteal Region in the subcutaneous plane as shown by the orange arrow.

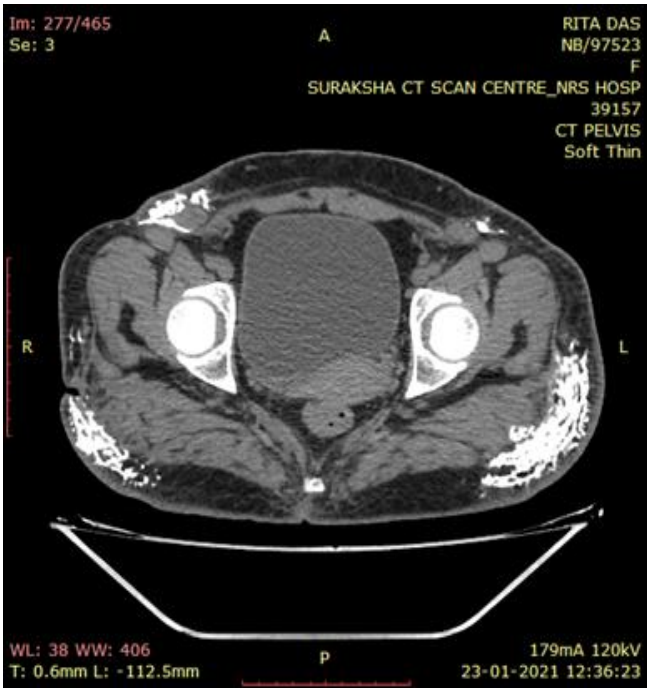

Fig 5: Shows extensive linear reticular calcifications in bilateral gluteal subcutaneous fat (Rt>Lt) and both inguinal subcutaneous fat. In FIGURE 5 there is an additional sinus tract in the lateral aspect of Rt gluteal Region in the subcutaneous plane as shown by the orange arrow.

Fig 6: Shows typical butterfly rash over the cheeks

Differential diagnosis

Dystrophic calcification
Chronic venous insufficiency with phlebolith
Calcinosis cutis
Scleroderma
Dermatomyositis
Myositis ossificans progressive
Myocysticercosis

Discussions

The term lupus is a Latin word which means wolf [1], this term was invented by Rogerious, a well-known physician of 13th century. The term Lupus Panniculitis was coined by a scientist called Irgang in the 1940s.Lupus panniculitis is a relatively rare disorder involving hypodermis and the fatty layer of the subcutaneous plane. The reproductive age group is more vulnerable to be affected. It can manifest in an isolated manner even in the absence of SLE [2].It clinically

manifests as painful gradual increasing skin lesions which may ulcerate in future causing dimpling of the affected skin surface. These lesions are usually located in proximal extremities (such as hands and shoulders), face, trunk, scalp and rarely salivary, orbital and buttocks [3]. The presumed etio pathology of panniculitis involve excess of autoantibodies cytokines and immune complexes leading to inflammation followed by necrosis in deep dermis[4].Imaging studies can help in early detection of Lupus Panniculitis in unusual sites which are often misdiagnosed by dermatologists. There is very little study available to enumerate the findings of Lupus Panniculitis by different imaging modalities. Ultrasound can demonstrate the inflammatory processes and associated changes including hyper perfusion involving the subcutaneous layer of adipose tissue in the affected areas [5]. One can also show the associated collection or any suspicious mass or any calcific changes which the chronicity of the pathology. Computed Tomography can co-relate the inflammatory processes and also demonstrate the extent of pathology [6]. As in our case we found gross linear reticular calcification [7] involving the bilateral gluteal regions presenting as hard feeling in bilateral buttock of this patient. We also showed that in computed tomography the calcifications extended to bilateral inguinal regions. We are reporting this case as literature about the imaging of lupus panniculitis in bilateral buttock along with sinus track in a patient of long standing chronic SLE on medications is extremely hard to find. We also demonstrated that the medications usually used commonly to control SLE and Lupus Panniculitis had controlled all her symptoms of SLE except that of lupus panniculitis.

Conclusions

The differential diagnosis of soft tissue calcifications in gluteal region are vast having almost similar clinical presentations. Only different imaging modalities can narrow down to most probable diagnosis. We can also co relate with the soft tissue biopsy if needed in future for confirmatory evaluation. Lupus panniculitis is a rare manifestation in patients having SLE. It can also mimic various dermatological conditions which can be confusing so we radiologist have to be aware of all probable manifestations with respective imaging features of every variant of SLE so that we can even help the physical and pain medicine specialist for the early diagnosis and treatment changes if needed for the benefit of the patient. We mainly demonstrated that lupus panniculitis can co present with sinus tract and that the usual medications used to control SLE has failed in preventing the progression of lupus panniculitis although the other common manifestations of SLE was well under control.

Foot points

Acknowledgements

None

Declaration of competing interest

None

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