



## CASE STUDY

### PANCREATIC ENZYME PANNICULITIS-AN UNUSUAL PRESENTATION IN AN ASYMPTOMATIC PATIENT

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#### ABSTRACT

Pancreatic panniculitis is rare form of panniculitis associated with pancreatic disease. The skin manifestations can occur at any time of the pancreatic pathology. Here we report a case of pancreatic panniculitis in a patient with no pancreatic pathology.

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## INTRODUCTION

Pancreatic Panniculitis is a rare complication of pancreatic disease. It is most commonly seen in patients with acute or chronic pancreatitis. It also occurs in acinar cell type carcinoma of pancreas. (Luis Requena and Everisto Sanchez Yus, 2001) Its incidence is approximately 2-3 % of all patients with pancreatic diseases. (Luis Requena and Everisto Sanchez Yus, 2001)

### Case report

A 64 year old diabetic female presented with a necrotic skin patch over the right buttock allegedly following regular intramuscular multivitamin injections at the site. After routine investigations and ensuring normoglycemia, the patient was posted for debridement of ulcer over the right buttock. Intraoperatively, there was a patch of necrotic subcutaneous tissue with diffuse calcifications. Histopathology examination of the specimen revealed 'pancreatic enzyme panniculitis'. Clinically, the patient never had any history suggestive of pancreatitis and serum amylase and lipase which were sent

subsequently, were within normal limits. An abdominal CT scan showed normal pancreas with normal main pancreatic duct. The patient then underwent a Rotational flap over the right gluteal region to cover the large defect which had resulted from the debridement.

## DISCUSSION

Panniculitis is a group of inflammatory disorders of subcutaneous fat with several variants. It can be septal or lobular with or without vasculitis. Pancreatic panniculitis is a lobular panniculitis without vasculitis and has an enzymatic pathology. Chiari first described the association between pancreatic disease and subcutaneous fat necrosis in 1883. (Kalwaniya *et al.*, 2015) Subcutaneous fat necrosis and painful nodular panniculitis may result from chronic pancreatitis or carcinoma of the pancreas presumably due to the liberation of lipolytic enzymes-lipase, amylase and trypsin into the circulation in the setting of pancreatic injury. Other causes include pancreatic pseudocyst, post-traumatic pancreatitis, pancreas divisum or hemophagocytic syndrome. Skin lesions are presenting features in 40 % patients of pancreatic panniculitis. (Rongioletti and Caputo, 2013) These lesions present with tender, oedematous and erythematous subcutaneous nodules.

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Fig. 1. Necrotic skin patch



Fig. 2. Rotational flap surgery

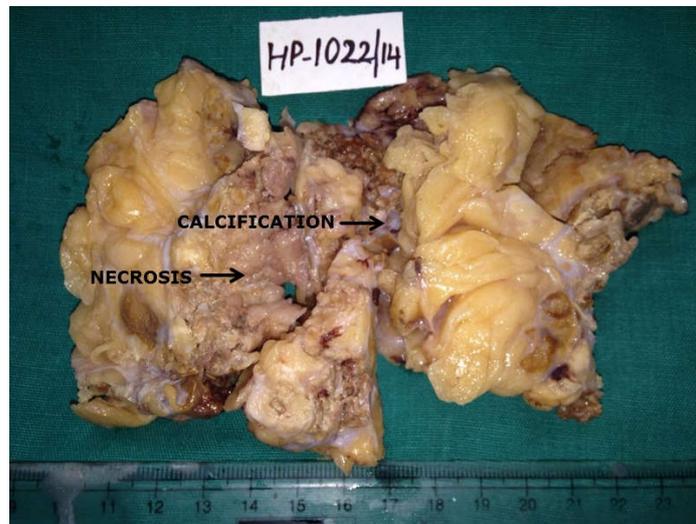


Fig. 3. Gross Specimen

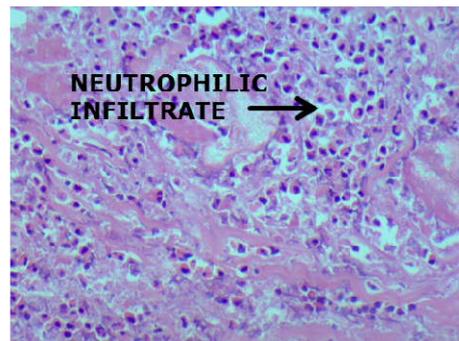
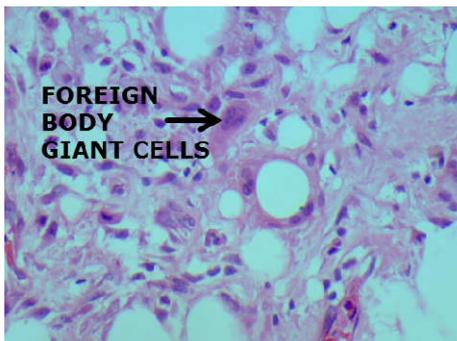
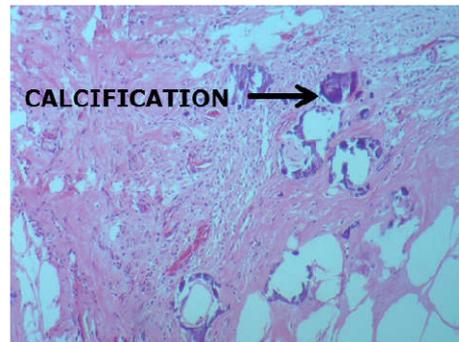
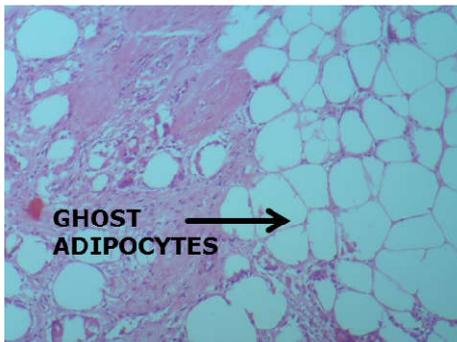


Fig. 4. Microscopic features of pancreatic Panniculitis

The subcutaneous nodules associated with pancreatic disease can precede, occur concurrently with or follow the pancreatic pathology. The most common site being lower legs and other uncommon sites are thighs, buttocks, arms, abdomen, chest and scalp. (Bagazgoitia *et al.*, 2009) In addition to the skin, fat necrosis may involve peri-articular and intramedullary adipose tissue. Diagnosis is based on skin biopsy. On histology, the pathognomonic feature of pancreatic panniculitis is “ghost adipocytes” (Lewis *et al.*, 1992) which have thick shadowy walls and no nuclei. Panniculitis due to pancreatic disease may be associated with arthritis (especially of the ankles), pleural effusions, ascites and eosinophilia. In patients with these systemic features, the prognosis is poor. Schmid's triad includes panniculitis with polyarthritis and eosinophilia. (Agrawal *et al.*, 2013) Distinctive laboratory values in pancreatic panniculitis include eosinophilia and elevated serum lipase levels. (Moro *et al.*, 2011) A triad of pancreatitis, panniculitis and poly arthritis is known as “PPP Syndrome”. (Narvaez *et al.*, 2010) It is a rare syndrome with high morbidity and mortality so a high index of suspicion is required to diagnose it and initiate timely and appropriate treatment. Treatment involves supportive care and usually targeted at underlying pancreatic pathology.

### Conclusion

Panniculitis may be the first manifestation of pancreatic disease. Therefore clinicians must have a high index of suspicion for the diagnosis of pancreatic panniculitis. It is one of the differential diagnosis in patients with subcutaneous nodules.

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