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Case Report

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# Lichenoid dermatitis in association with Pancrelipase -A rare case report

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## Introduction

Lichenoid dermatitis (LD) is an intensely pruritic rash with pink to purple plaques. Medications often associated with LD are furosemide, thiazide diuretics, beta-blockers, and ACE inhibitors. LD is often generalized (similar to other drug exanthems) involving sun exposed areas of skin.

Pancreatic enzyme preparations have been used in the management of malabsorption disorders [1, 2]. The most common side effects include headache (3-15%), abdominal pain (3-18%), neck pain (14%), ear pain (11%), nasal congestion (14%) and lymphadenopathy (11%). Rare side effects include allergic reactions, anaphylaxis, hives and pruritus. We describe a case of lichenoid dermatitis in association with pancrealipase. To the best of our knowledge, this side effect has never been reported in associaton with pancrelipase.

**Key Words:** Pancrelipase; malabsorption; rash; lichenoid dermatitis ; anti-histamines

## Case Presentation

A 67-year-old man with newly diagnosed pancreatic cancer underwent Whipple's procedure. He was nondiabetic, nonhypertensive. There was no history of extramarital contact. After the surgery, he was started on pancreatic enzyme replacement with pancrelipase. A few weeks after, patient noticed rash on the legs. The rash was pruritic, papular with purplish tinge; grouped together over the legs (See figure 1). There were also isolated lesions on the forearm that were disc like plaques, purplish and itchy ( See figure 2). Punch biopsy of one of the lesion on the right calf demonstrated dermal lymphoid aggregate with eosinophils (See figure 3 and 4). History was not suggestive of any other medication intake. He was nonreactive for HIV, HBV and HCV antibodies. A diagnosis of drug reaction,lichen planus, atopic dermatitis and chronic cutaneous lupus erythematous was considered.

A) A drug reaction
B) Lichen planus
C) Atopic dermatitis
D) Chronic cutaneous lupus erythematous

### Clinical course

Discontinuation of pancrelipase (as that was the only medication he was taking) led to resolution of the rash. However, discontinuation exacerbated the malabsorption symptoms and hence pancrelipase was

restarted. This eventually led to recurrence of the rash. Patient was symptomatically managed with 10 mg of cetirizine, each time with meals along with pancrelipase and 2 tablets of 10 mg cetirizine at bedtime. This eventually resulted in symptomatic control and relief from itching.

Figure 1: Papular, purplish, pruritic lesions over the lower extremity.

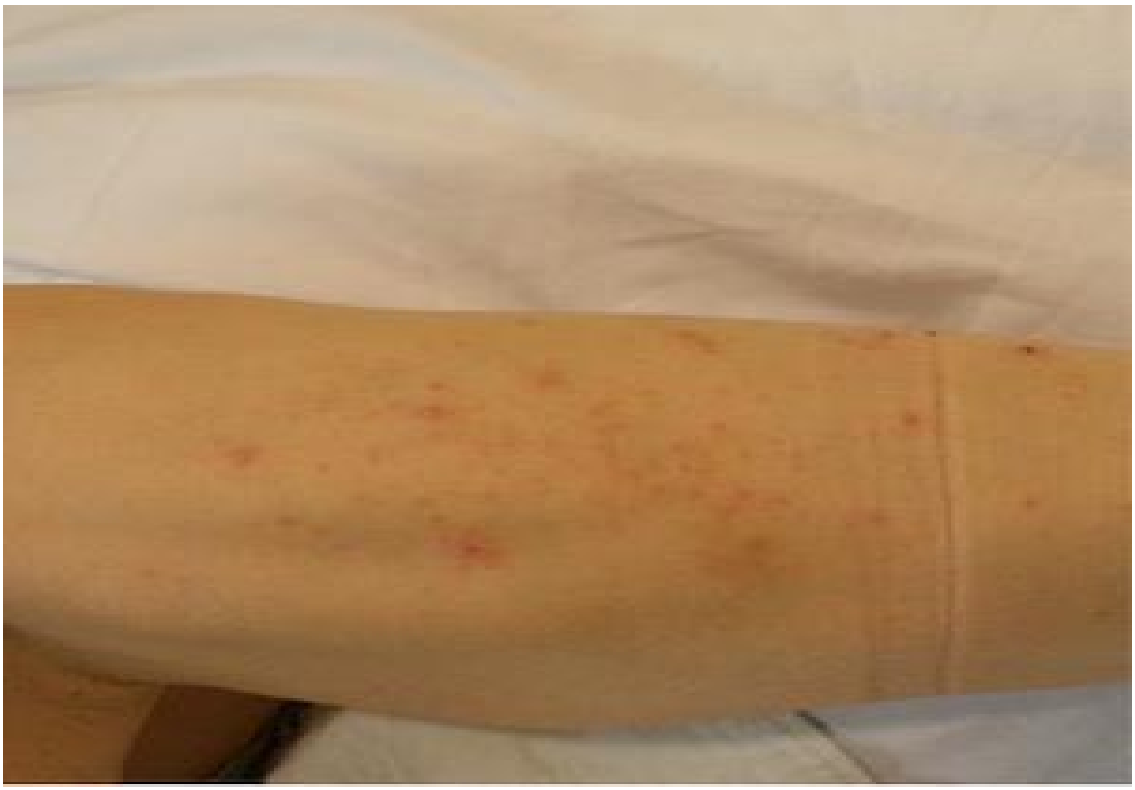


Figure 2: Pruritic plaque on the forearm.

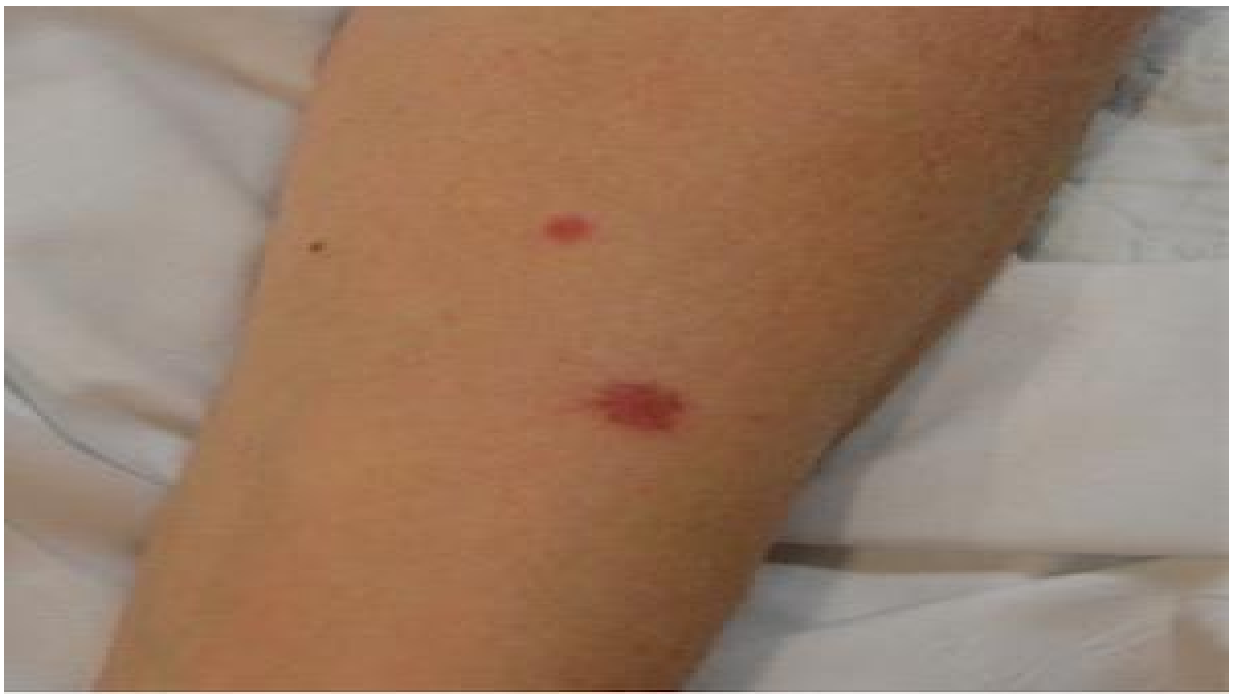


Figure 3: Dermal lymphoid aggregate with eosinophils consistent with fixed drug eruption (lichenoid dermatitis).

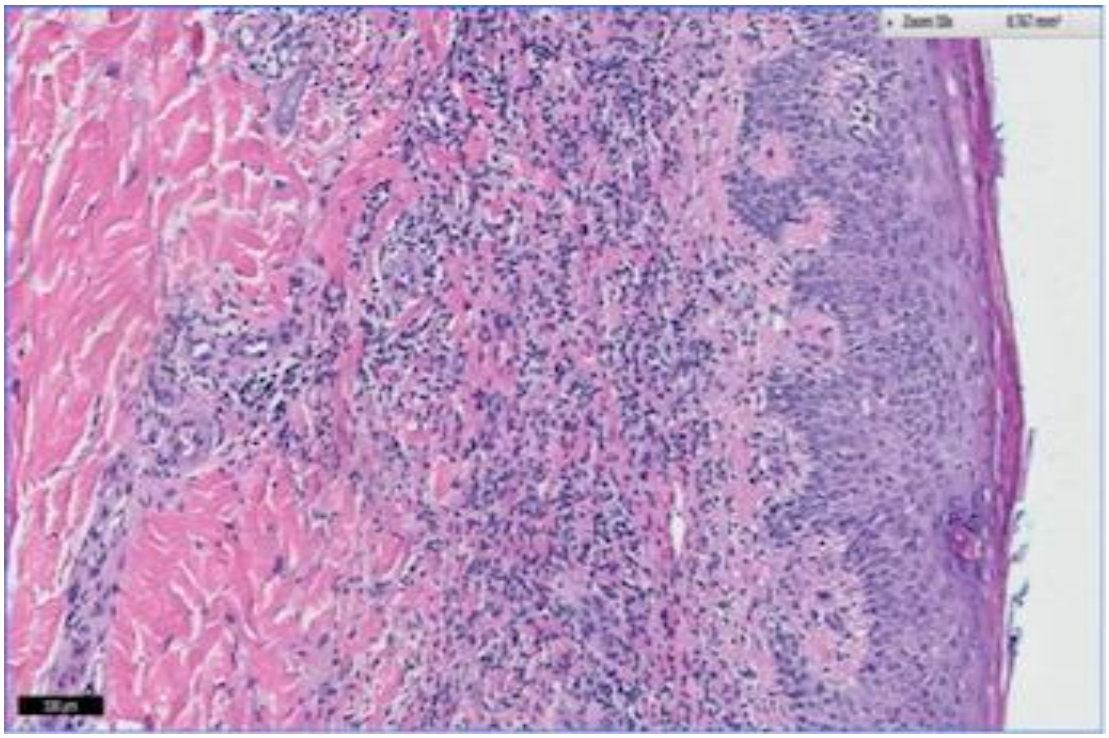
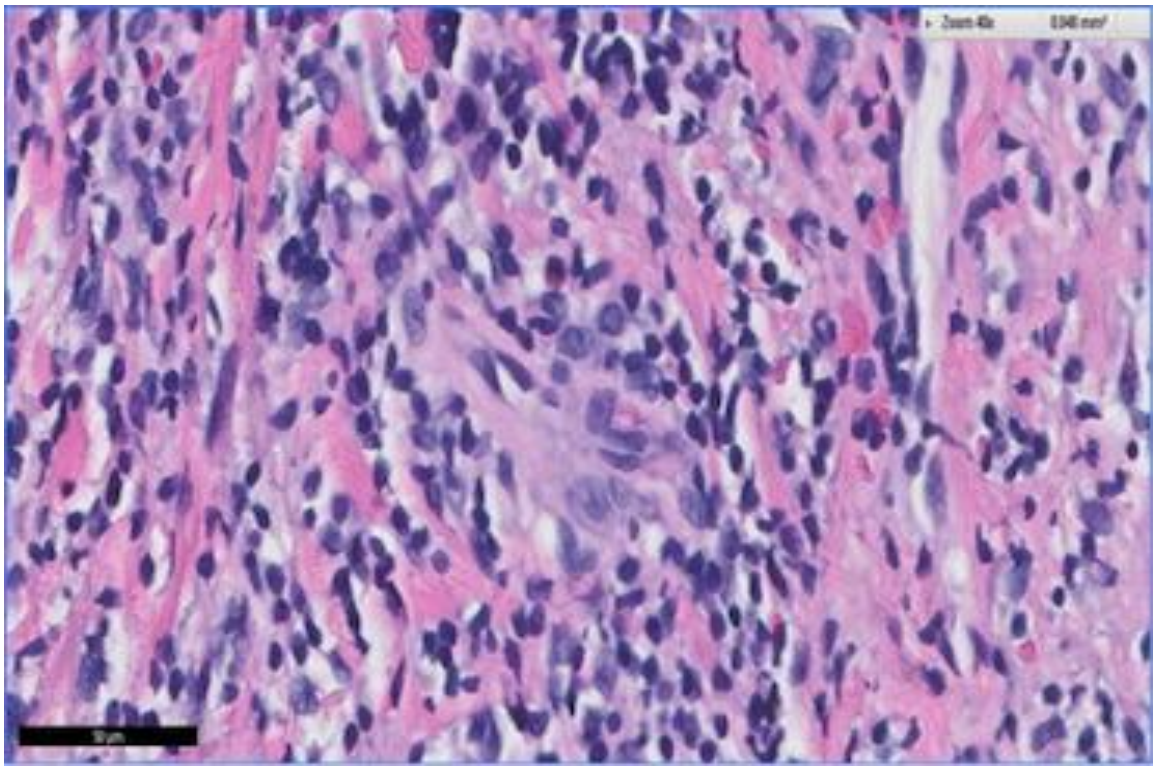


Figure 4: High power image showing occasional eosinophils (finding that distinguishes lichenoid dermatitis from lichen planus)



## Discussion

Pancrelipase is porcine derived product of pancreatic amylase, pancreatic lipase and chymotrypsin. Pancrelipase (a.k.a. Creon) is available either as enteric-coated microspheres or as non enteric coated preparations [3]. It is widely used for management of symptoms of pancreatic insufficiency. These are deemed to be safe and effective. As per the systematic reviews and meta-analysis, there is no significant difference in the rate of adverse effects between pancreatic enzyme therapy and placebo [4, 5]. However, pancrelipase is porcine derived and delayed hypersensitivity reactions to porcine products have been established in the past [6]. Hence, it should not be given to people with hog allergies [7]. This warning is mentioned on the package inserts of pancrelipase. Inspite of these warnings, it is difficult to differentiate between the population allergic to hog products compared to the population, which is not. Therefore, because of these reactions, rare side effects come into picture, which are not usually seen before.

Lichenoid dermatitis is an uncommon condition. Latency period between the exposure to offending drug and appearance of LD varies from days to months to years. It depends on the host factors, nature of the offending agent and the immune response. It is likely secondary to inflammation of the epidermis and is often associated with intense pruritus. Differential diagnosis of LD includes lichen planus, atopic dermatitis and chronic cutaneous lupus erythematous.

Lichen planus presents as intensely pruritic, pink to purple, flat-topped lesions with white stripes called 'Wickham's striae'. Lichen planus often exhibits Koebner phenomenon, which is the development of lesions following injury to skin. Skin eruptions caused by commonly used medications can resemble lichen planus. Diagnosis and differentiation can be made with biopsy. Clinically, LD can resemble lichen planus and is also known as 'drug induced lichen planus'. However, Wickham striae, which is seen in lichen planus, is not seen in lichenoid dermatitis.

Histologically, in both lichenoid dermatitis and lichen planus, there is damage of the basal epidermal keratinocytes (eosinophilic colloid bodies) with multiple apoptotic cells, band like lymphocytic infiltration at dermal-epidermal junction, and pigmentary incontinence (mostly in dark skinned people. However, histopathological findings that favor lichenoid dermatitis compared to lichen planus include focal parakeratosis and interruption of the granular layer, presence of eosinophils and plasma cells, infiltration of the upper epidermis with lymphoid cells and deeper perivascular infiltrate [8, 9].

## Conclusion

We demonstrate a rare case of LD in association with pancrelipase (finding which has never been reported before). However given the necessity of pancrelipase in the patient after Whipple's procedure, and to minimize drug reaction, symptomatic control and relief from itching was achieved with anti-histamines.

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**Conflict of interest:** None declared

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