# Pyoderma gangrenosum: An uncommon cause of nonsexually acquired genital ulcer disease

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## Abstract

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis affecting various sites, isolated genital PG being an uncommon presentation. We report a case of a 50-year-old diabetic male who presented with 2 penile ulcers. Extensive evaluation was done for sexually and nonsexually transmitted infections, malignancy, drug-induced vasculitis, and immunobullous etiology. A diagnosis of PG was made based on the clinical findings and histopathological exclusion of other causes. The patient showed a rapid response to prednisolone, dapsone, and colchicine. This report highlights the importance of keeping PG as a differential diagnosis in cases of genital ulcers which may mimic other sexually transmitted infections.

## Key words: Nonsexually acquired genital ulcer, penile ulcers, pyoderma gangrenosum

## Introduction

Pyoderma gangrenosum (PG) is a rare neutrophilic dermatosis (incidence: 0.73/1,00,000 person years) affecting various sites, isolated genital PG being an uncommon presentation. Almost 75% cases are associated with underlying systemic diseases such as inflammatory bowel disease, arthritis, and hematological disorders.[1] We hereby report a case of isolated penile PG without systemic involvement.

## Case Report

A 50-year-old gentleman presented with 2 ulcers over the glans penis for 10 days. They started as minimally painful papules which rapidly ulcerated with increase in size. There was no history of discharge, bleeding, fluid-filled lesions, trauma, recurrent oral ulcers, redness of eyes, joint pains, gastrointestinal symptoms, urethral discharge, fever, loss of weight, or appetite. The patient was married and gave a history of multiple extramarital contacts with commercial sex workers, last contact being 15 days before the onset of the ulcers. There was no history of sexually transmitted disease (STD) in partner. He was a known diabetic on irregular treatment for 5 years.

General examination was unremarkable. Peripheral pulses were palpable. There was no lymphadenopathy. Glans penis had two well-defined tender, indurated ulcers with necrotic grayish-white slough, regular margins, undermined edges, erythematous border measuring 3 cm × 2 cm and 0.5 cm × 0.5 cm [Figure 1a]. They did not bleed on touch. Rest of the mucosa, skin, palms, soles were normal.

## Laboratory investigations

Gram's stain revealed multiple polymorphonuclear leukocytes, no organisms. Tzanck smear showed no multinucleated giant cells or acantholytic cells. Screening for HIV, Hepatitis B and C, syphilis (VDRL and TPHA), and herpes simplex virus serology were nonreactive. His fasting, postprandial sugars, and HbA1c were

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and colchicine. Prednisolone was added for 6 weeks with ulcer near the meatal opening. He was restarted on dapsone and discontinued treatment by himself and developed another 0.5 mg thrice daily. After an initial response, the patient showed rapid improvement [Figure 1d].

Discussion
PG is an uncommon neutrophilic disease, pathophysiology of which is incompletely understood. It involves a complex interplay of genetic influence, dysregulation in innate immunity, and neutrophil dysfunction. It can affect all age groups with no sex predilection. Clinical variants include classic ulcerative, bullous, pustular, vegetative, peristomal, etc. Various diagnostic criteria have been proposed although validated criteria are still lacking. PG is an uncommon disease affecting all age groups. Diagnosis is made by excluding other causes. Pathergy may be seen in 20%–30% patients. Management includes avoidance of triggers, local wound care, and immunomodulatory therapies.

Few cases of isolated genital PG have been reported with only 4 from India. Our patient responded well to a combination of therapy with dapsone, colchicine, and oral prednisolone in addition to local wound care. This case is presented to highlight the importance of keeping PG as a differential diagnosis of penile ulcers refractory to usual treatment modalities.

Declaration of patient consent
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest
There are no conflicts of interest.

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