SKIN

BRIEF ARTICLE

Cutaneous Ulcerations as the Presenting Sign of Acute Aortic Occlusion

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ABSTRACT

This is a report of a case of acute aortic occlusion (AAO) in a 46-year-old woman who presented with confluent and coalescing punched-out ulcerations on the bilateral medial buttocks and abdominal ulcerations. This case highlights how AAO, although rare, should be considered in patients with cardiovascular risk factors presenting with acute lower extremity pain and new-onset cutaneous ulcerations of the perineum and/or abdomen.

INTRODUCTION

Acute aortic occlusion (AAO) is a life-threatening vascular emergency requiring prompt diagnosis and emergency intervention. AAO is often challenging to diagnose given the variation in clinical presentation, leading to high morbidity and mortality. AAO has rarely been reported in association with genital and sacral ulcerations. Cutaneous involvement is thought to be secondary to microembolization from the underlying aortic thrombus resulting in decreased blood flow. We report a case of AAO presenting with both perineal and abdominal ulcerations.

CASE REPORT

A 46-year-old woman presented to the emergency department with a chief concern of chronic left lower extremity pain, which she attributed to a spider bite. It had worsened over two years. Additionally, she reported a 3-day history of painful ulcers localized to the central abdomen and bilateral medial buttocks. Her medical history was significant for peripheral arterial disease, congestive heart failure, hypertension, and a history of 14 -pack -years tobacco use. Her surgical history was significant for iliac stenting and common femoral artery endarterectomy (CFE) two years prior to this presentation.

The dermatology department was consulted to evaluate the painful ulcers localized to the left lower extremity, abdomen, and buttocks. Physical examination of the bilateral medial buttocks revealed confluent and coalescing punched-out ulcerations with scalloped borders.

The lower abdomen was significant for a well-demarcated deep ulcer with green-yellow drainage, without undermined borders. The left lower extremity was significant for a well-demarcated ulcer with exposed tendon and overlying granulation tissue with surrounding

hyperpigmentation. Given clinical concern for AAO, urgent evaluation by vascular surgery was recommended.

The buttocks ulcers were swabbed for herpes simplex virus (HSV) and varicella-zoster virus (VZV) polymerase chain reaction (PCR). HSV and VZV PCR of the buttocks ulcers were negative. Complete blood count, rheumatoid factor, hepatitis screen, immunoglobulins and plasma protein electrophoresis were all normal.

A 6 mm punch biopsy was obtained for H&E and revealed nonspecific acute inflammatory changes with full-thickness necrosis. Gram stain and PAS stain for fungus were negative. A 3 mm punch biopsy was obtained for pan tissue culture (bacterial, fungal, and AFB). Bacterial culture was significant for normal enteric flora, rare staphylococcus epidermidis, rare enterococcus faecalis, and rare coryneform gram-positive rods. Fungal and AFB cultures were negative. Computed tomography angiography of the chest revealed a new onset distal occlusion of the abdominal aorta and bilateral external iliac arteries.

The patient underwent an emergent aortobifemoral bypass surgery and was started on systemic anticoagulation. The patient also underwent surgical debridement of the abdominal ulcer. One week after surgery, the patient reported improvement in the ulcerations localized to the buttocks and abdomen.

The patient subsequently underwent debridement of the left lower extremity. A wound vac was applied to the ulcers localized to the abdomen and left lower extremity. One month post-discharge, the abdominal wound vac was discontinued. The ulcers localized to the abdomen and buttock were fully healed. The lower extremity ulcer showed significant improvement and the patient continues to follow with wound care.

DISCUSSION

This patient experienced an acute aortic occlusion (AAO), presenting with worsening lower extremity pain and new-onset ulcerations of the buttocks and lower abdomen. Her presentation was likely associated with her underlying chronic peripheral artery disease, hypertension, and tobacco use. While ulcerations of the abdomen and buttocks were present in the emergency department, they were not attributed to the patient's underlying vascular disease, and AAO was not considered.

AAO is an infrequent vascular event that most commonly presents with bilateral lower extremity pain and weakness, due to ischemia. The classic triad includes bilateral leg pain, mottling of lower extremities, and sensory-motor deficits that can be followed by paraplegia.[1] In the majority of cases, including this case, AAO is caused by thrombosis of an underlying atherosclerotic plaque. AAO can also be caused by embolism or dissection.[1] Risk factors for AAO most commonly include dyslipidemia, male sex, smoking, diabetes mellitus, and hypertension.[2]

The association of AAO with cutaneous ulcerations, involving the buttocks and genitals are extremely rare, with only four cases previously reported to our knowledge.[3-6] Cutaneous presentation varies and includes herpetiform ulcerations, Fournier's gangrene, or pressure ulcers. Pyoderma gangrenosum-like ulcerations localized to the abdomen as the initial cutaneous manifestation of AAO has also been reported.[7] Our case involved both herpetic ulcerations of the buttocks and

pyoderma gangrensoum-like ulcerations of the abdomen.

AAO is a life-threatening emergency and although rare, should be considered in patients with cardiovascular risk factors who present with acute lower extremity pain and new-onset cutaneous ulcerations of the groin, buttocks, abdomen, and/or lower extremities. Herpetiform ulcerations of the buttocks in this context should be an important clue. Early evaluation with computed tomography imaging and surgical intervention can be lifesaving. This case underscores the importance of dermatology in the inpatient hospital setting. Collaboration between dermatology and vascular surgery can lead to early detection and intervention.

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