

Postoperative Trouble



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A 73-year-old man presented 2 weeks after bilateral total knee arthroplasty with painful ulcerative lesions on bilateral surgical sites. The patient first noticed erythema around the incisions 1 week after surgery, which was followed by the development of ulcerations. These lesions progressed despite wound care and a course of oral doxycycline. On examination, both knees had ulcerative lesions with violaceous undermined borders (Figure 1). The radiograph showed well-fixed prosthesis. Synovial fluid analysis showed cell count of 3342 cells/uL with 42% neutrophils and 3035 with 53% neutrophils from the right and left knee, respectively, and cultures remained negative. Skin biopsy was obtained, which showed spongiform pustules and diffuse dermal neutrophilic

inflammation consistent with pyoderma gangrenosum (PG).

Postoperative pyoderma gangrenosum (PPG) refers to the PG that develops at the surgical site in the immediate postoperative period. In contrast to the PG, which is associated with autoimmune diseases and hematologic malignancies in approximately 50% of the cases, PPG is associated with systemic disease in only 18% to 34% of the cases.^{1,2} Symptoms typically appear 7 days after surgery, and most cases are initially misdiagnosed as wound infection, which leads to administration of unnecessary antimicrobial therapy or surgical debridement in 90% and 73% of the cases, respectively.¹ Diagnosis may be delayed up to 14 days after initiation of symptoms.¹ Treatment usually includes systemic steroids and/or immunosuppressive medication including tacrolimus or cyclosporine.

In our case, the appearance of bilateral painful ulcerative lesions with violaceous

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FIGURE 1. Photo of bilateral knee ulcerations.



FIGURE 2. Photo after 2 months of treatment.

undermined margins in the second postoperative week raised the suspicion of PPG. The patient was started on topical tacrolimus and oral prednisone 1 mg/kg daily, which was tapered off over the next 4 weeks with subsequent healing of the lesions (Figure 2).

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1. Tolkachjov SN, Fahy AS, Cerci FB, Wetter DA, Cha SS, Camilleri MJ. Postoperative pyoderma gangrenosum: a clinical review of published cases. *Mayo Clin Proc.* 2016;91(9):1267-1279.
2. Zuo KJ, Fung E, Tredget EE, Lin AN. A systematic review of post-surgical pyoderma gangrenosum: identification of risk factors and proposed management strategy. *J Plast Reconstr Aesthet Surg.* 2015;68(3):295-303.