Bilateral Pyoderma Gangrenosum Following Bilateral Reduction Mammoplasty: Case Report

Bilateral Redüksiyon Mammoplasti Sonrasında Gelişen Bilateral Piyoderma Gangrenozum

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ABSTRACT Pyoderma gangrenosum is a chronic ulcerative noninfectious disease of the skin. It is rare and one of the worst postoperative complications following aesthetic surgery of the breast. When a wound does not respond to local wound care and antibiotic therapy, a surgeon should always suspect pyoderma gangrenosum. In this article, in order to emphasize the frequent misdiagnosis and mistreatment of pyoderma gangrenosum, we described a case of bilateral pyoderma gangrenosum following reduction mammaplasty that was treated successfully with cyclosporin.

Key Words: Postoperative complications; pyoderma gangrenosum; mammoplasty

ÖZET Piyoderma gangrenozum, derinin nonenfeksiyöz kronik ülseratif bir hastalığıdır. Estetik meme cerrahisinden sonra nadiren görülür ve ciddi postoperatif komplikasyonlardan birisidir. Bir yara, lokal yara bakımına ve antibiyotik tedavisine cevap vermediğinde, cerrah daima piyoderma gangrenozumdan şüphelenmelidir. Bu makalede, piyoderma gangrenozum olgularında sıklıkla karşılaşılan yanlış tanı ve yanlış tedaviyi vurgulamak için redüksiyon mammoplastiden sonra gelişen ve siklosporin ile başarı ile tedavi edilen piyoderma gangrenozum olgusu sunulmaktadır.

Anahtar Kelimeler: Postoperatif komplikasyonlar; piyoderma gangrenozum; mammoplasti

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Reduction mammoplasty is one of the most common procedures in plastic surgery. Pyoderma gangrenosum (PG) is rarely reported as a complication following breast surgery.[1-8] It is an uncommon ulcerative cutaneous disorder of unknown etiology. It may occur in otherwise healthy persons or in association with a systemic disease. Overall, approximately 50% of patients have a systemic disease. The most common diseases associated with PG are ulcerative colitis, Crohn's disease and rheumatoid arthritis.[9-13] Management of PG involves medical control of the inflammatory phase of PG and local wound care.

CASE REPORT

A 36-year-old woman with no history of systemic illness, allergy or autoimmune disease, underwent a bilateral inferior pedicle reduction mammoplasty. The patient complained of pain after two weeks following

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surgery. Erythema, edema, heat and superficial ulcers were noted along the breast incisions. There was no fever or other systemic symptoms. The blood count showed moderate leukocytosis. Initial diagnosis was wound infection, even though bacteriologic cultures were negative for microorganisms, the patient was sent home with oral antibiotic. The wounds failed to heal over the next month despite repeated courses of antibiotics and conservative wound care (Figure 1). She was then referred to the dermatology unit for further evaluation. PG was suspected and a wound biopsy was advised. Histopathologic evaluation of the biopsy specimen revealed fibroblast proliferation, neutrophils, eosinophils and mononuclear inflammatory cells along the ulcer site compatible with PG. No associated disease was detected. Antibiotics were discontinued and the treatment was continued with oral cyclosporin A 250 mg daily and a mixture of silverdine, bepanthene and prednol cream topically. Wounds on both breasts started to heal within two weeks and over the next three months; they completely healed by secondary intention (Figure 2).

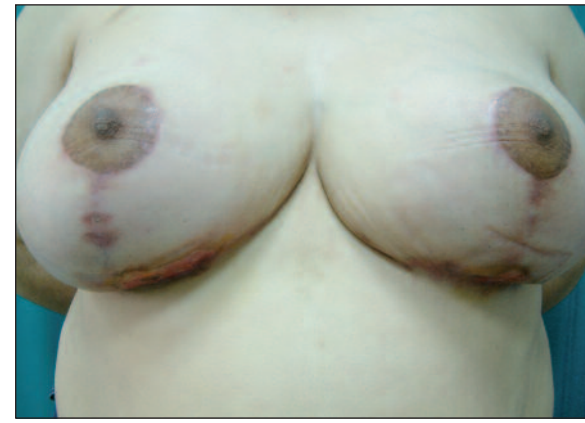

FIGURE 1: The appearance of the breasts at the time of the diagnosis of pyoderma gangrenosum.
(See for colored form http://tipbilimleri.turkiyeklinikleri.com/)

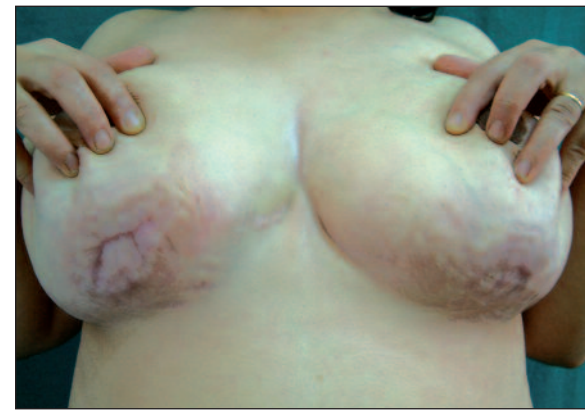

FIGURE 2: The final appearance following treatment with cyclosporin.
(See for colored form http://tipbilimleri.turkiyeklinikleri.com/)

DISCUSSION

PG was first described by Brunsting, Goeckerman, and O'Leary in 1930.[14] They considered infection as an etiology of this disorder. However, no infectious cause was identified. The cause of PG still remains unknown. It may be idiopathic or it may be associated with various systemic disorders including inflammatory bowel diseases, arthritis, paraproteinemias and hematologic malignancies. Hepatitis C or other viral infections, Wegener's granulomatosis, systemic lupus erythematosus and other autoimmune diseases are other likely causes.[9-13] Twenty-three percent of cases are induced and aggravated by minor trauma or surgery and this, points out the pathergy phenomenon in the PG. It was also reported as a complication of various surgical interventions, such as hernioplasty, cardiac surgery, cesarean section and breast surgery.[1-8,14-17]

Since postoperative infection or synergistic gangrene can be clinically very similar to PG, initially the problem was thought to be the result of an infection. Necrotizing wound infections require immediate and aggressive surgical debridement. Conversely, in patients with PG, operative intervention can be complicated by pathergy and it may result in new ulcer formations on traumatized skin regions and may also be resistant to local wound care and antibiotics. Therefore, PG has to be considered in the diagnosis and management.[18]

When PG is suspected, other infectious causes should be ruled out. Treatment of PG with immunosupressive therapy would be disastrous since PG is a serious condition. Culture from the wound should be taken for bacteria, mycobacteria, atypical mycobacteria, and deep fungal infection because those conditions can mimic PG. When the accurate diagnosis is established by clinical presen-

tation, histopathology reports, and the exclusion of the pathogens, additional investigations should be carried out for any underlying systemic disorder. Successful management of the associated disease may decrease the morbidity and shorten wound care time.[19]

PG usually requires aggressive local and systemic treatment.[20] Local therapy is directed to relieve the pain, to prevent or to treat the secondary bacterial infection and to provide a convenient enviroment for wound healing. Local therapy includes cleaning the wound with saline or antibacterial agents such as hydrogen peroxide or benzoyl peroxide. Use of wet compresses and nonsensitizing topical antibacterial creams may be beneficial. In many cases, the wound can be left to heal by secondary intention. However, larger wounds may require skin grafting or flaps for closure. Operative management should be performed when medical therapy has controlled the inflammatory phase of PG. Long et al. suggested that the risk of pathergic PG was reduced when subcuticular sutures were used for skin closure, rather than sutures going through the skin.[15,18-21]

Systemic treatments include sulfones and other antimicrobials such as dapsone, clofazimine, minocycline, which have been used with different success rates.[12,22] However, the recognized first line treatment of this disorder is immunosuppressive medication with steroids. Prednisone has proved to be the most consistently successful agent. It is crucial to control the disease rapidly; so high-dose prednisone at initial treatment is preferred with slow tapering to prevent recurrence. Immunosuppressive therapy includes the use of cyclophosphamide, melphalan, chlorambucil, imuran and cyclosporine. Cylosporine has shown to be the most promising agent especially in severe recalcitrant cases of PG.[23-29] In addition, long-term maintenance therapy may be required in some patients because of persistent and recurrent nature of the disease.

In summary, this case emphasizes the difficulty of distinguishing PG from an acute infection. Delay in diagnosing PG may lead to prolongation of therapy and extensive scar formation. This condition should always be considered in patients who develop rapid progressive nonhealing ulcers after surgery.

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