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Case Study

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A CASE REVIEW OF A 65-YEAR-OLD MALE WITH RIGHT LOWER LIMB NECROTIZING FASCIITIS – DISCUSSION AND MANAGEMENT

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ABSTRACT

BACKGROUND: Necrotizing fasciitis is a potentially fatal infection of the skin, subcutaneous tissue, and fascial planes that progresses quickly. Because of its high risk of amputation and death, early surgical intervention is crucial. **CASE Presentation:** For one day, a 65-year-old man complained of decreased urine flow, watery discharge, and soreness in his right lower limb. Other than a history of varicose vein surgery three years prior, he had no serious comorbidities, fever, or systemic symptoms. Local examination showed palpable peripheral pulses along with blisters, pain, and edema from the foot to below the knee. Following infection management, the patient had split-thickness skin grafting (SSG) and several debridements. Piperacillin-tazobactam and clindamycin, two broad-spectrum intravenous antibiotics, were empirically given and sustained in accordance with clinical response. **Management and Result:** A slow recovery resulted from multidisciplinary therapy that included teams from cardiology, nephrology, vascular, and surgery. The patient had stable hemodynamics, adequate transplant uptake, and no infection recurrence. After 52 days in the hospital, he was released in better health. **Conclusion** this case shows that even in patients lacking traditional risk factors, necrotizing fasciitis can manifest atypically. Even in senior patients, excellent results and limb preservation can be achieved via rapid surgical debridement, coordinated multidisciplinary therapy, and early diagnosis.

KEYWORDS: Soft Tissue Infection, Necrotizing Fasciitis, Debridement, Skin Graft, Limb Salvage, Elderly Patient.

INTRODUCTION

One of the most prevalent soft tissue infections, necrotizing fasciitis carries a significant risk of amputation. The prognosis of the condition is significantly influenced by early surgical intervention.[1] Approximately 27% of cases of necrotizing fasciitis involve the upper limbs, but it can affect any area of the body and is regarded as a surgical emergency. Erythema, excruciating pain, and pyrexia are examples of nonspecific symptoms.[2]

Usually caused by Streptococcus pyogenes, Staphylococcus aureus, Enterococcus faecalis, and Clostridium, necrotizing fasciitis is a dangerous illness that spreads quickly and damages the skin, subcutaneous tissue, and fascial planes. However, infections involving numerous species are prevalent. Often referred to as "flesh-eating disease," this condition spreads along fascial planes and, if left untreated, can cause severe tissue death and systemic toxicity.[3]

Both aerobic and anaerobic species can cause the infection, however polymicrobial infections are the most common cause.[2] Thus, necrotizing fasciitis is a potentially fatal microbial infection that needs to be treated right away.[1,3]

CASE PRESENTATION

The day before admission, a 65-year-old man complained of pain in his right lower limb, which was accompanied by watery discharge and decreased urine output. Trauma, fever, dyspnea, palpitations, chest pain, abdominal pain, constipation, or loose stools were not present.

He had underwent surgery three years prior for varicose veins. No history of coronary artery disease, chronic renal disease, stroke, hypertension, TB, or Type 2 diabetes mellitus was known.

On physical examination, the patient was conscious, oriented, and afebrile. His vital signs were normal (BP: 120/80 mmHg, PR: 78/min, SpO_2 : 99% on room air).

Systemic examination
- CVS: S1, S2 heard.
- RS: Bilateral air entry present without added sounds.
- Abdomen: Soft, bowel sounds present, non-tender.

Local examination of the right lower limb revealed tenderness and swelling extending from the foot to below the knee, blisters over the foot, and palpable peripheral pulses.

DISCUSSION

In this instance, a 65-year-old patient spent 52 days in the hospital. The patient had unusual symptoms for necrotizing fasciitis, including localized discomfort and watery discharge without fever or systemic indications.

The intricacy of management is emphasized by multidisciplinary care, which includes cardiology, nephrology, vascular surgery, and general surgery. For doctors handling comparable high-risk infections, the progression from initial presentation to diagnosis, operational procedures, and postoperative recovery offers important insights into prompt management and postoperative monitoring.

Despite the high death rate associated with necrotizing fasciitis, the patient's result was favorable despite their advanced age. Early surgical intervention can improve results, even in severe situations, as demonstrated by the patient's recovery with preserved limb function. The hallmark of necrotizing fasciitis, an infection of the skin and soft tissues, is the death of cutaneous tissue that reaches deep into the muscles.[4] Diabetes, substance abuse, obesity, immunocompromised conditions, recent surgery, and local tissue devitalization are typically risk factors for necrotizing fasciitis.[5]

Such risk variables were absent in this instance, underscoring the significance of keeping a high level of suspicion even in low-risk individuals. But three years before, the patient had underwent varicose vein surgery. To handle necrotizing fasciitis, several graded debridements were carried out in order to eliminate necrotic tissue and manage infection. Later, a split-thickness skin graft (SSG) was done to seal the defect and encourage recovery. Broad-spectrum intravenous antibiotics that cover both aerobic and anaerobic organisms were empirically started for the patient. These included clindamycin (600 mg every 8 hours) and piperacillin-tazobactam (4.5 g every 8 hours). Based on clinical improvement and cultural sensitivity, the therapy was extended for ten days. Intravenous fluids, analgesics, and wound treatment with VAC dressing were examples of supportive measures.

SURGICAL MANAGEMENT

Since early treatment improves results, reduces tissue loss, and avoids amputation, surgery is the main treatment for necrotizing fasciitis. To encourage quick healing, the lesion is left open, wrapped in sterile gauze, and treated often after debridement to remove pus and necrotic tissue.[6]

Rapid debridement was used in this instance to eliminate all necrotic tissue and stop the infection from spreading. To guarantee that all of the devitalized tissue was removed, the patient needed many debridements and a second-look surgery.Skin discoloration, swelling, discomfort, diarrhea or nausea, dizziness, pus discharge, ulcers, blisters or black spots, and redness are some of the severe symptoms of necrotizing fasciitis, an uncommon but dangerous bacterial illness.Complications could include shock, sepsis, and organ failure if left untreated.

Low urine output in this patient was most likely caused by renal inflammation brought on by an infection or septic shock. Despite the quick efficacy of intravenous antibiotics, surgery was still the recommended course of action because of the severe necrosis and inadequate perfusion. Although Vibrio vulnificus can also cause similar infections, Group A Streptococcus is the most common causal bacteria.[7]

Extensive wound debridement was carried out under spinal anesthesia, removing subcutaneous tissue and necrotic skin until healthy margins showed. After hemostasis was accomplished and the wound was cleansed with hydrogen peroxide and betadine, sterile moist gauze was used to dress it.After granulation and infection control were accomplished, split-thickness skin grafting (SSG) was carried out. The right lower limb received skin grafts from both thighs, which were fastened using surgical staplers. Graft absorption was guaranteed by routine antiseptic dressing.

The graft site was regularly cleansed and redressed throughout follow-ups. With gradual wound healing and no indications of graft rejection or secondary infection, the patient handled all procedures with ease.

Outcome and Follow-up

While in the hospital, the patient gradually improved. Following split-thickness skin grafting, the incision healed nicely and showed no symptoms of necrosis or reinfection. Hemodynamic parameters stayed constant although pain and inflammation decreased. The patient was released on oral medication in better health.

CONCLUSION

Necrotizing fasciitis is still a deadly infection that progresses quickly and needs to be diagnosed and treated very away. This case shows that even in patients without traditional risk factors, necrotizing fasciitis can manifest with unusual symptoms. Timely surgical debridement, interdisciplinary teamwork, and careful postoperative care led to favorable results and limb preservation. Even in older patients, survival can be considerably increased with early intervention and appropriate care.

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I confirm that I have obtained full consent from the patient to use his clinical details for educational and publication purposes. This report was prepared with the assistance of artificial intelligence for language enhancement only; all medical content and interpretation are based on the original clinical findings.

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