



A RARE CASE OF NECROTIZING FASCIITIS FOLLOWING INTRAMUSCULAR INJECTION

Plastic Surgery

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KEYWORDS

INTRODUCTION

Necrotizing fasciitis is a rare but severe infection characterized by sudden and extensive necrosis of the tissues (dermis, subcutaneous tissue, fat, superficial fascia, deep fascia, or muscle) and is associated with a high mortality rate. The infection is caused by mono- or polymicrobial flora. The common causes are insect bites, chronic wounds, trauma, and less frequent causes are injections or surgical wounds.¹

Case Report

A 64 year old male with no comorbidity and any significant past history was admitted to our department after the debridement of left thigh and gluteal area. Patient had received an intramuscular injection (Diclofenac Potassium) in left gluteal area. Two months back patient started with pain in arm (shoulder) and consulted a local practitioner who prescribed an intramuscular injection for pain relief. After two days patient developed redness and swelling in left gluteal area, and was not able to bear weight on left leg. Patient reported to emergency department of our hospital and was admitted in surgery as a case of necrotizing fasciitis left gluteal area extending up to lower back and thigh. Patient was put on broad-spectrum IV antibiotics and debridement of all necrotic tissue was done. Patient was then shifted to our department for further management. Patient was continued on culture based IV antibiotics, daily bedside debridements and dressings for two weeks. Then patient was put on NPWT (VAC) for two weeks for preparation of wound for definitive treatment. Patient was managed by STSG of left thigh, leg and sacral area was covered by rotational flap.

DISCUSSION

Necrotizing fasciitis (NF) is an infection that results in the death of body's soft tissues. It is a severe disease, which has a sudden onset and spreads rapidly. NF is rare and has been reported to have an incidence of 4.3 out of 100,000 in the USA². It is characterized by rapid necrosis of tissue, which may result in multiple organ failure and septic shock³⁻⁴. The reason is considered to be spontaneous or post-traumatic bacterial infiltration into the body tissues⁵. Typically, the infection enters the body through a break in the skin, such as a cut or burn. Trauma, crush injuries and cancer predispose to NF, poor immune function such as from diabetes or cancer, obesity, alcoholism, intravenous drug use, and peripheral vascular disease are among the other risk factors⁶. Microbial invasion of the tissue can occur either externally at the site of the trauma or by affecting the gastrointestinal and genitourinary systems. Examination may reveal a complex clinical condition such as erythema, an area of red or purple skin in the affected area, severe pain, fever, vomiting, hypothermia, and altered mental status due to fever or septic shock.^{5,7} The most commonly affected areas are the limbs and perineum. NF frequently occurs in lower extremities, blisters formation first occurs, followed by necrosis. In addition, the trunk, abdomen, head, neck, or anus may also be infected. If the lesion is in the perineum or genital area, it is labeled as Fournier's gangrene.^{3,6} NF is generally classified into two groups: polymicrobial and monomicrobial. Type I NF is called polymicrobial and Type II NF is called monomicrobial NF.^{1,8} Medical imaging is often helpful to confirm the diagnosis. NF may be prevented with proper wound care and hand washing. It is usually treated with surgery to remove the infected tissue, and intravenous antibiotics. Delay in surgery is associated with a much higher risk of death. Despite high quality

treatment, the risk of death is between 25-35%².

Infections after intramuscular injections are rare, considering millions of people across the globe are getting intramuscular injections. Most often injections are pain killers. Differential diagnosis includes: cellulitis, pyomyositis, and gas gangrene. Common complications of intramuscular injections are;

1. Severe pain at the injection site.
2. Tingling or numbness.
3. Redness, swelling or warmth at the injection site.
4. Abscess formation
5. Periostitis.
6. Gangrene of the skin at the site of injection.
7. Allergic reactions like difficulty in breathing, or fascial swelling.
8. Injury to sciatic nerve most often occurs.

Common drugs given intramuscularly are;

1. Pain killers.
 2. Antibiotics.
 3. Biologicals like immunoglobulins, Vaccines and toxoids.
 4. Hormones like Testosterone, Medroxyprogesterone injections.
- Most often these injections are pain killers.

In our patient, following surgical debridement, appropriate antibiotic therapy (based on sensitivity tests) and negative-pressure wound therapy. We achieved full recovery in this complicated case of necrotizing fasciitis.

CONCLUSION

NF is a rapidly developing, life-threatening infection that affects the soft tissue and fascia. Without a correct diagnosis and appropriate treatment, high mortality rates can be observed. The most important factor in the diagnosis is suspicion of NF based on clinical findings. As soon as NF is suspected, infection control must be provided without delay through quick surgical debridement and appropriate antibiotic therapy. In addition to these treatments, use of negative-pressure wound therapy will heal the wound by providing drainage of secretions, safe protection of the wound, prevention of bacterial contamination, increases in microcirculation by angiogenesis, and formation of good-quality granulation tissue.



Wound after VAC Tream



Wound after closure with local flap and STSG

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