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CASE REPORT

Necrotising fasciitis—A rare complication of split-thickness skin graft donor site

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***Abstract*:** Split-thickness skin grafting (STSG) is commonly used to cover raw areas of various aetiologies. Donor sites are known to get infected sometimes, but necrotising fasciitis is not often reported. We report here a case of donor-site necrotising fasciitis and its successful management. There is a need for surgeons to stay vigilant for this rare but probable complication of skin grafting.

***Keywords*:** Skin grafting; necrotising fasciitis; donor site

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Introduction

Split-thickness skin grafting (STSG) forms an important part of the armamentarium for raw-area coverage for burns, trauma and other aetiologies. These days, STSG is considered a gold standard for covering skin wounds with a large surface area[1]. Donor sites of STSGs are managed as per standard departmental protocol at our institute, which includes donor site haemostasis followed by a tight dressing with padding after covering the donor site with paraffin gauze. The dressing falls off by itself upon healing or is opened three weeks post-operation, unless there is some complication such as systemic or local signs of infection, gross soakage in the dressing and so on.

Case report

A 35-year-old male presented to our out-patient department (OPD) with a raw area involving the left gluteal region developed as a result of necrotising fasciitis post intra-muscular injection administration. Patient's gluteal region was debrided at an outside facility and was referred for the raw area coverage. The patient did not have any history suggestive of immunocompromised status. After a few dressings, raw area around 35 × 15 cm remained with healthy granulation tissue that was split-skin grafted. Anterior, lateral and posterior surfaces of the right thigh and posterior surface of the right leg were used as donor sites for STSG. There was 95% graft take at the left gluteal region with normal healing of the thigh donor sites without any evidence of infection on the 21st post-operative day (**Figure 1**).

The right leg donor site's dressing was found to be partly soaked. On opening the dressing there was evidence of skin necrosis, seeping of dishwater-coloured fluid along with necrosis of subcutaneous tissue till the level of deep fascia. The involved area was half of the overall donor site's area, *i.e.* an area of 5 × 4 cm (**Figure 2**). Clinical diagnosis of necrotising fasciitis was established with a positive finger test, which was characterized by the lack of resistance to finger dissection in a plane between deep fascia and subcutaneous tissue. There were no systemic signs and the infection was localised under donor site dressing only. Immediate surgical debridement (**Figure 3**) was done and the patient was put on antibiotics. Antibiotic used was amoxicillin (500 mg) with clavulanic acid (125 mg) three times a day for seven days. Culture returned as mixed growth of organisms with commensals. The patient underwent dressings for his disease on OPD basis and the prepared wound was later skin grafted.

Discussion

STSG is a very common surgery in all plastic surgery and burn units worldwide. Recipient area management is an important part of patient care, but we should also

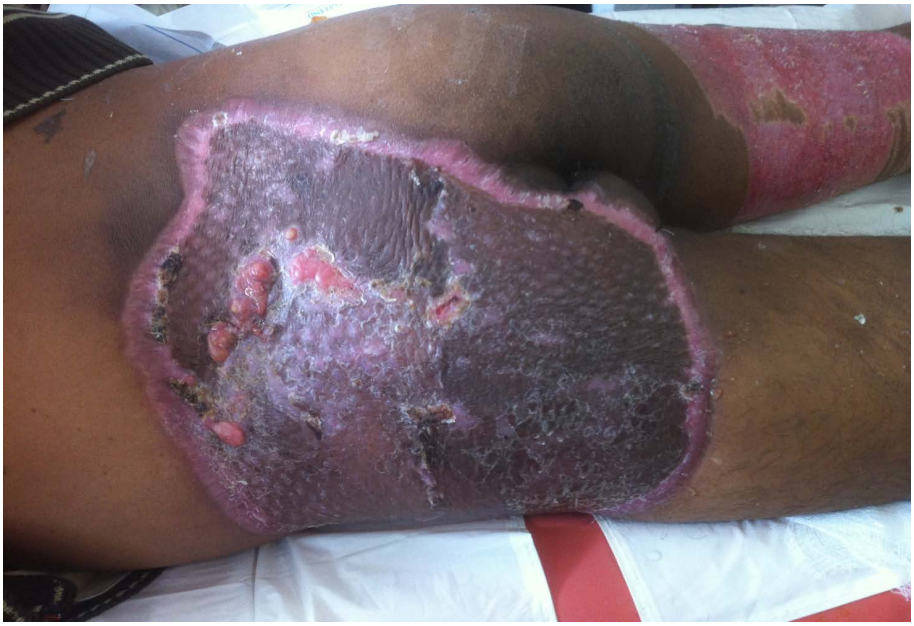

Figure 1. Left gluteal recipient site with good graft take and healed right thigh donor region

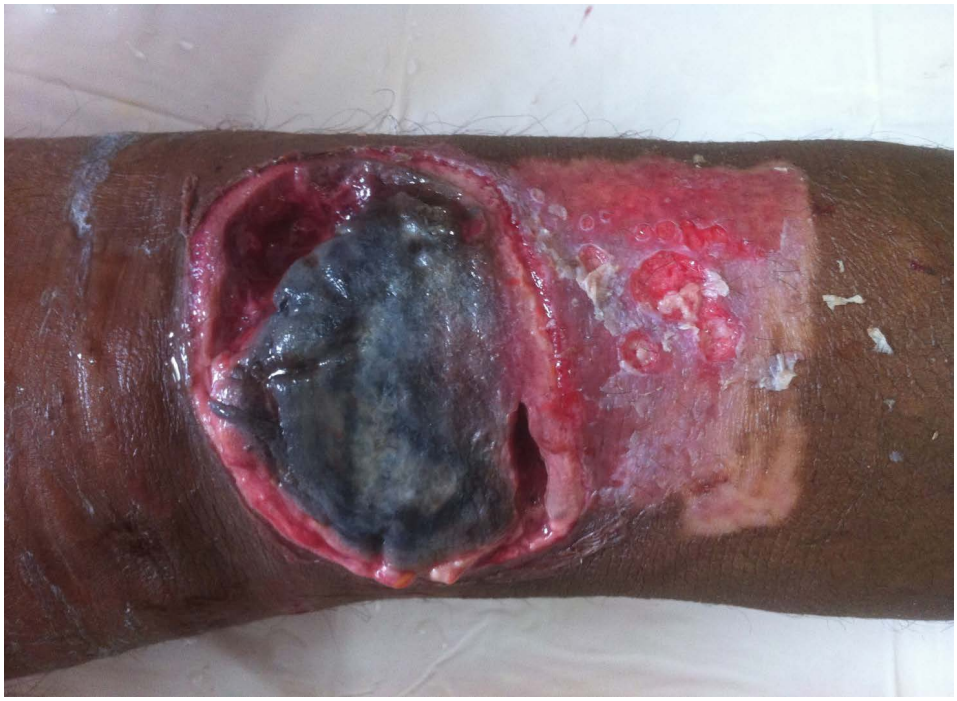

Figure 2. Right leg donor site's necrotising fasciitis

keep at the back of our minds that donor site care is also equally important. Donor site morbidities such as pain, risk of infection, discolouration and scarring can be more troublesome for patients than the primary wounds themselves[2,3]. Early complications of donor site include infection and itching, as mentioned in literature[4]. This case highlights a complication of the donor site, which can be disastrous if not detected and treated in time. There is a paucity of literature reporting necrotising fasciitis as a complication of STSG donor site. The authors could not find any mention of the same during their exhaustive attempts for cross-referencing this report.

The authors would like to attribute the second episode (donor site) of necrotising fasciitis in this patient to

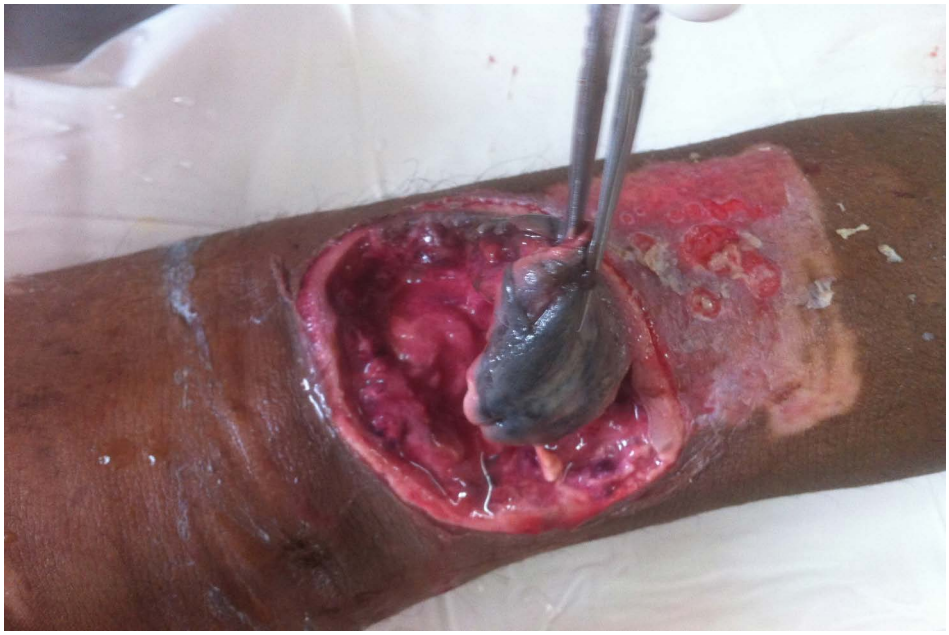

Figure 3. Debridement being done of the infected donor site

neglect. Patient underwent multiple dressings near his home before reporting back to our hospital on the 21st post-operative day with soakage of his dressing. Thorough and more vigilant inspection of his donor site might have triggered the opening of dressing at an early stage. A single episode of necrotising fasciitis after intramuscular injections is not very uncommon, especially in the periphery where steps to maintain sterility are not always taken. A second episode of necrotising fasciitis was hidden under the donor site dressing and was very limited in area (5 cms in maximum dimension). The patient was well preserved with other well-healed donor sites and did not exhibit any sign or symptom to suggest an overt immunocompromised status.

The authors conclude with a recommendation of having a low threshold for opening and checking donor site dressings irrespective of post-operative duration if there is any sign or suspicion of infection. We should also learn from the present case that strict instructions should be given at the time of referral for diligent inspection and care of donor site dressing by the patient as well as by the local doctor or general practitioner.

Conflict of interest

The authors declare no potential conflict of interest with respect to the research, authorship, and/or publication of this article.

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