

Introduction

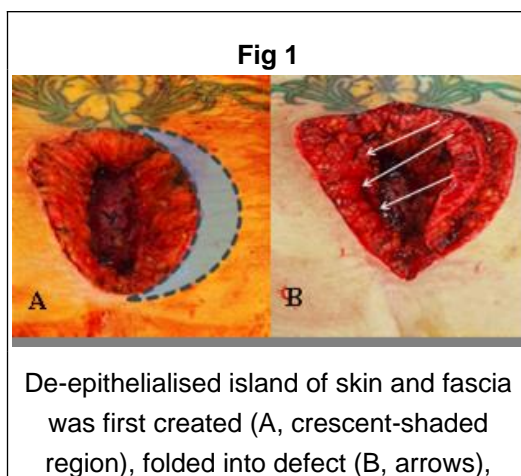
Surgical site infection after adult spine surgery is not uncommon. When conservative measures fail, wound debridement for dehiscence is often required, and plastic surgery input needed for subsequent reconstruction. Previously described techniques include myocutaneous flaps or perforator based fasciocutaneous flaps. These can be time-consuming and surgically challenging. We propose a simple and effective alternative flap.

Learning Objectives

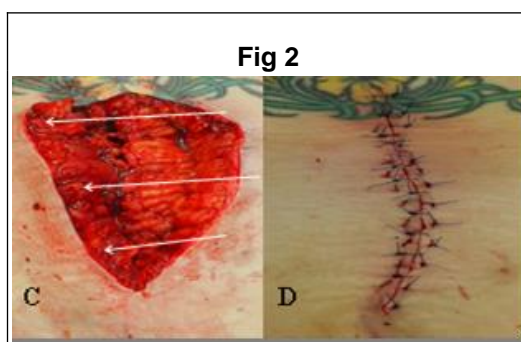
To demonstrate the effectiveness of a relatively simple and novel technique employing a local islanded de-epithelialized double-breasted fasciocutaneous transposition flap, for the repair of non-irradiated spinal wounds.

Methods

Four patients with failed conservative management of infected midline posterior spinal wounds, underwent wound repair with a local islanded de-epithelialized double-breasted fasciocutaneous transposition flap, performed by joint input from the neurosurgical and plastic surgical teams.



De-epithelialised island of skin and fascia was first created (A, crescent-shaded region), folded into defect (B, arrows),



The flap was then sutured down to the deep fascia with vicryl (C, arrows) and finally the skin is undermined and sutured double breasted over the flap (D).

Results

The flap was used to repair one wound in the cervical spine, one in the thoracic spine with underlying fixation, and two wounds in the lumbar-sacral spine, of which one had underlying fixation. In all patients, pre-operatively the wounds were either dehiscent with exposed hardware, or had large defects, unsuitable for direct closure, following debridement. Follow-up ranged from 2 to 24 months. One patient died at two months post-operatively due to progression of underlying metastatic disease. All patients demonstrated good wound healing with no subsequent repeat surgery or removal of spinal fixation.

Conclusions

We demonstrate the importance of plastic surgical input with problematic spinal wounds, and successful management using a de-epithelialized fasciocutaneous flap that has not previously been described in repair of spinal wounds. This technique, which led in all cases to good wound healing and prevented removal of metalwork, has comparable efficacy but increased ease of use versus previous techniques.



Lumbar wound at 12-month follow-up.