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## Management of a complex necrotising fasciitis wound in a district general hospital

### Introduction

We present the case of a 40 year-old lady who presented with necrotising fasciitis which was successfully treated with the combination of prompt resuscitation, broad spectrum antibiotics, urgent debridement, novel VISTA dressings, split-skin grafting and intense physiotherapy in a district hospital setting.

### Method

A 40 year-old lady presented to the emergency department with painful swelling and discolouration of her left thigh following injection of heroin into the spider veins of her left groin. Past medical history included cirrhosis of liver, carcinoma of the cervix and hepatitis B and C. On examination she was unwell, drowsy, tachycardic (pulse 120/min), hypotensive (BP 89/53 mmHg) with a temperature of 37.5°C. There was a large necrotic tender area in the medial aspect of her left thigh extending from the groin crease to the medial side of the left knee and the popliteal fossa.

### Results

A clinical diagnosis of necrotising fasciitis was made and patient underwent fluid resuscitation and antibiotics (clindamycin and metronidazole). She was taken to the operating theatre for urgent debridement. Under general anaesthesia she underwent extensive debridement of all the necrotic tissues of her left thigh. Postoperatively she was nursed in the high dependency unit. Following discussion with the tissue viability nurse she was considered a suitable candidate for negative pressure wound therapy (NPWT). VISTA (Smith & Nephew, Hull) dressings were applied to the wound with a pressure setting of -100mmHg (see image 1 and 2). The dressings were changed alternate days initially (see image 3) and subsequently every third day. Wound swabs were obtained at every change of dressing. With the use of gauze-based NPWT allowed sealing of the wound and containment of high volumes of exudate and no microbial contamination was detected from the sequential wound swabs during therapy. The wound was healing with healthy granulation tissue. She then underwent split thickness skin grafting of the area which aided the process of healing (see image 4).

### Discussion

Necrotising fasciitis is a rare but serious infection of the deeper layers of the skin and the subcutaneous tissues which easily spreads across the fascial planes. Common causative organisms are group A *Streptococcus* (*Streptococcus pyogenes*), *Staphylococcus aureus* including MRSA, *Vibrio vulnificus*, *Clostridium perfringens* and *Bacteroides fragilis*. Necrotising fasciitis can be lethal if not recognized and treated promptly and adequately.

### Conclusion

This 40 year-old lady with extensive necrotising fasciitis and multiple co-morbidities was successfully managed in a district general hospital with a multidisciplinary approach. Modern dressing systems like VISTA improve care of difficult wounds and help in wound healing with reduction of surface area requiring subsequent grafting.



Image 1: Pre NPWT application



Image 2: NPWT *in situ* prior to switching on the device



Image 3: Application of NPWT, 48 hours post first application



Image 4: Healed

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