

## Extensive Subcutaneous Emphysema, Necrotising Soft Tissue Infection: A Case Report

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### INTRODUCTION:

Necrotizing soft tissue infection (NSTI); more commonly known as “flesh eating disease” is a rare but life threatening disease. Commonly seen in immunocompromised patients, this disease requires prompt and aggressive treatment. Clinical assessment is an important factor in early diagnosis and aggressive treatment. At onset, however, it is difficult to differentiate from other superficial skin conditions such as cellulitis. Therefore, early suspicion is the key.

### CASE REPORT:

A 73-year-old woman of Malay descent with no known medical illness has presented at our centre with a history of 3 days of lethargy, fever and sudden onset of delirium. She was referred to our orthopaedic team for possible extensive necrotizing fasciitis. Upon attending, merely a bruise over the left medial malleolus and a small puncture wound over the sole of her foot were noticed. Clinical examination shows extensive crepitus felt from the left lower limb, extending all the way to the left side of her abdomen, chest and neck. Clinical imaging shows the subcutaneous gas shadow present in these areas. She was also seen by the surgical and medical team to rule out any other cause of the extensive subcutaneous emphysema. Vital signs was within normal range however her blood parameters were all abnormal ; showing a picture of severe sepsis with multi organ failure. Blood culture was retrieved and intravenous antibiotics was started for her. However, she has succumbed to her illness before she was stable enough for any surgical intervention.



Figure 1 : Bruising over the medial malleolus and small puncture wound on the sole



Figure 2 : Left: Gas shadow seen in the right lower limb; Left: Extensive subcutaneous emphysema extending up to chest wall and neck

### DISCUSSIONS:

Necrotizing skin infections were first described by Jones in 1871, although at the time the term hospital gangrene was used. The term necrotizing fasciitis was coined by Wilson in the 1950s to describe necrosis of the fascia and subcutaneous tissue with relative sparing of the underlying muscle.

Discussion includes risk factor, types of microbial capable of causing extensive necrotising soft tissue infection, basic anatomy and current management of necrotizing soft tissue infection.

### CONCLUSION:

NSTI requires early diagnosis and aggressive treatment. This disease is rare but deadly, with high mortality and mortality index. Recognizing and differentiating NSTI from other skin infection is the first step in saving a patient's life.

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