

Necrotising Fasciitis Originating from a Vulval Abscess – A Case Report

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ABSTRACT

This article reports a rare case of necrotising fasciitis starting out as a vulval abscess with rapid progression to a potentially lethal condition. Elderly people with medical conditions such as diabetes are especially prone to it. A high index of suspicion and an early surgical consult are essential in improving outcome in this condition. Once diagnosed, aggressive surgical debridement with antibiotic cover is crucial. This is followed up with meticulous nursing care of the large wound till it heals. The various diagnostic points and treatment modalities are also discussed.

Keywords: necrotising fasciitis; vulval abscess; cellulitis; medical illness; surgery; antibiotics; hyperbaric oxygen

INTRODUCTION

Necrotising fasciitis was first described by Meleney in 1924 and has been regarded as a rare condition⁽¹⁾. There has been a resurgent interest in the disease recently which was mainly due to media attention given rather than to an increased incidence in the disease^(2,3). Although it is found mainly in elderly male patients, the disease spares no age group and occasionally affects women as well.

This article describes a rare case of an elderly woman initially admitted with a vulval abscess which rapidly developed into necrotising fasciitis and the subsequent management.

CASE REPORT

Madam GW was an 81-year-old Chinese lady with a history of hypertension, diabetes mellitus for many years and mild chronic renal impairment. She complained of left vulval pain with swelling for 3 weeks and had developed general weakness for three days prior to her admission.

On admission, her general condition was stable. She was found to have a vulval abscess on the anterior aspect of the left labia majora of 1 cm diameter which had already pointed and discharged its pus a few hours prior to admission. There was also an area of cellulitis extending from around the abscess to the mons pubis.

A swab taken from the left vulval abscess grew *Pseudomonas aeruginosa* and anaerobic organisms including *peptostreptococcus*. She was initially treated with ceftriaxone and cloxacillin. This was switched to

ciprofloxacin and sulbactam sodium when the culture reports were available. The discharging abscess was treated with twice daily dressing with chlorhexidine solution. Her blood sugar was controlled with subcutaneous insulin injections and hypertension was controlled with propranolol.

The abscess responded to treatment and became dry. However, the cellulitis did not improve and she developed 4 necrotic pustules over the mons pubis, each approximately 1 cm in diameter at the end of one week (Fig 1). By that time, the cellulitis had spread to involve most of the lower two thirds of the anterior abdominal wall from flank to flank. This was associated with progressive oedema of the skin of the anterior abdominal wall till it resembled peau d'orange (Fig 2). She remained afebrile with no leucocytosis on her blood counts.

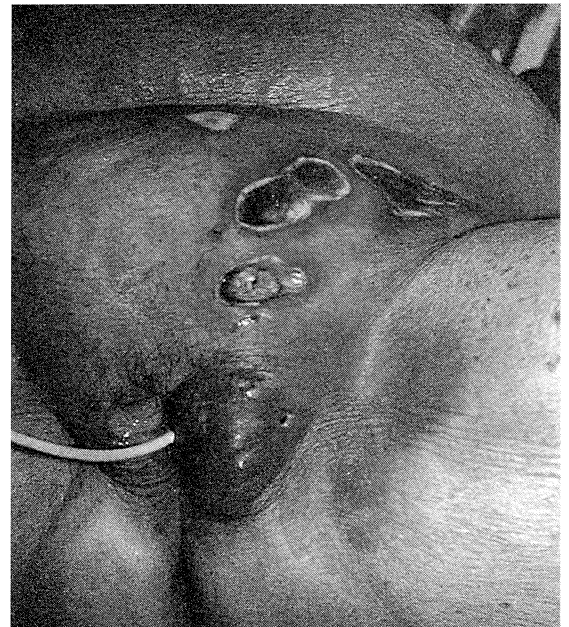


Fig 1 – Four necrotic pustules over the mons pubis



Fig 2 – Peau d'orange appearance of the anterior abdominal wall

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Fig 3 – Excision and debridement of necrotising fasciitis



Fig 4 – The abdominal wound as seen 12 weeks after operation

Necrotising fasciitis was diagnosed and she underwent an excision and debridement of the infected area (Fig 3). The area of necrotic skin, fat and fascia extended from the left vulva up to the level of the subcostal margin superiorly and laterally to the mid-axillary line on either side. Necrotic tissues from this entire area was excised to expose healthy external oblique muscle beneath and the wound was packed with tulle gras and chlorhexidine dressing. Antibiotic cover was provided with crystalline penicillin, cloxacillin, ceftazidime and metronidazole.

Post-operatively, she was monitored in the intensive care unit as she had developed haemodynamic instability intra-operatively. There was a low grade fever. Desloughing and wound dressing was done daily. On the sixth post-operative day, the wound culture grew methicillin-resistant *Staphylococcus aureus* (MRSA). Her recovery was also complicated by cardiac failure on the 14th post-operative day but responded to medical therapy.

She responded slowly to medical therapy and the wound became clean and free of slough gradually although repeated bacterial cultures revealed the presence of MRSA (occasionally with beta haemolytic streptococcus group B or *Pseudomonas aeruginosa*). She stayed in hospital for 12 weeks by which time her wound was clean with granulation tissue forming although the big defect in her anterior abdominal wall was still present (Fig 4). She was sent to a nursing home for further convalescence and daily wound dressing. She is well and the wound continues to be clean and is healing slowly.

DISCUSSION

Although it was first described by Meloney in 1924⁽¹⁾, the term “necrotising fasciitis” was first used by Wilson in 1952⁽⁴⁾. It is a rare condition and is defined as a soft tissue infection characterised by widespread necrosis of subcutaneous tissue and fascia, with secondary necrosis of the overlying skin. Muscle is usually spared and the disease is usually accompanied by systemic toxicity. It is associated with high morbidity and mortality⁽⁵⁻⁷⁾. Survival is usually associated with early diagnosis, rapid and intensive medical and surgical intervention.

Most patients are elderly and have underlying medical illnesses which predispose to this problem, such as diabetes (the most common associated illness), hypertension and chronic renal failure⁽⁸⁾. This patient had all of the above-mentioned medical problems. There is usually a precipitating cause and in this case, it was a vulval abscess.

The patients are usually very sick and the diagnosis is clinical. Classically, the diagnostic signs include severe pain, fever, skin discolouration, progressive cellulitis, subcutaneous crepitus and systemic toxicity. However, the diagnosis is often missed in the early stages because the skin may appear deceptively normal, only to progress rapidly to reveal the typical clinical picture seen in this case. Thus, it has been stated that all cases of atypical cellulitis should have immediate surgical referral⁽⁹⁾.

Once a diagnosis is made, the treatment is by radical excisional surgery to remove the skin, subcutaneous fat and the deep fascia overlying the muscle. Broad spectrum antibiotic cover is also important as it is common to have more than one organism involved⁽¹⁰⁾. Repeated desloughing is usually required as was in this case. Hence, although the diagnosis was made one week after initial presentation in this case, aggressive surgical and medical intervention enabled this woman to survive albeit with great morbidity.

Hyperbaric oxygen has been described as another treatment modality available for treating this condition^(11,12). Although its use was considered during the immediate post-operative period in this patient, logistical problems associated with transporting an ill patient as well as the lack of concrete evidence as to its benefit made it an unfavourable option.

CONCLUSION

Although rarely seen in gynaecological practice, necrotising fasciitis should be suspected in elderly high risk patients with an atypical cellulitis. The mainstay of treatment is aggressive surgical debridement with antibiotic cover as well as appropriate management of the underlying medical condition. This should be coupled with good nursing care and frequent surveillance of the debrided wound. With a high index of suspicion, early diagnosis and an aggressive approach to its management, the mortality and morbidity associated with this serious condition can be reduced.

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PROVISIONAL PROGRAMME FOR THE 7TH MOH-MAYO CLINIC UPDATE 31 OCTOBER – 1 NOVEMBER 98

THEME

Allergies in Clinical Practice

VENUE

Auditorium, COMB

DATE

Saturday 31 Oct 98

Session I

11.00 am – 12.45 pm

Recent Advances: Pathogenetic
Mechanisms of Asthma

Session II

2.00 pm – 3.30 pm

Clinical Aspects of Asthma

Session III

3.50 pm – 5.20 pm

Airway Allergy

DATE

Sunday 1 Nov 98

Session IV

2.00 pm – 3.20 pm

Skin Allergy

Session V

3.40 pm – 5.00 pm

Drug and Food Allergy

FREE ADMISSION