A Case Report Of Necrotizing Fasciitis After Routine Elective Repeat Caesarean Section

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Introduction

Necrotising fasciitis describes a rare but potentially fatal infection of the skin, subcutaneous tissues and fascia, with half of cases occurring in young and low risk individuals. It requires prompt identification and management to mitigate its high rate of morbidity and mortality, the cornerstones of which are early empirical intravenous antibiotics and surgical debridement. This case describes the course of necrotising fasciitis in a young, healthy multiparous woman after uncomplicated repeat caesarean section.

Case

Day 0 A 35-year-old G2P1 woman with an unremarkable medical history and antenatal course had an elective repeat caesarean section at term.

Day 6 The procedure and immediate recovery course were uneventful, and she was discharged home on day 6 postpartum.

Day 7 She presented with localised wound infection day 7 postpartum so was admitted and commenced on empirical intravenous antibiotics (penicillin + flucloxacillin). The evening of admission she became febrile to 38.7°, blood cultures were collected and antibiotics were escalated to IV flucloxacillin and amoxicillin + clavulanic acid as per infectious disease advice.

Day 8 Ultrasound and CT abdomen showed inflammatory changes above the sheath and there was concern for possible necrosis. On advice of the general surgical team a pressure VAC dressing was applied.

Day 9 The following day there was further deterioration of the wound and the patient was taken to theatres for surgical debridement *(image 1)*. IV antibiotics were escalated to vancomycin, tazocin and clindamycin via PICC line. Post-op she was admitted to ICU for monitoring and remained clinically well.

Day 11-12 She had three adjunctive hyperbaric oxygen sessions in addition to re-look laparotomies after 48 hours, then 24 hours, each time with pressure VAC dressings applied. There was no extension of necrosis.

Week 3 The patient underwent surgical closure of the wound with a skin flap the following week. She remained on triple IV antibiotics via PICC line which unfortunately developed a 6cm thrombus in the basilic vein. This was managed with prophylactic clexane after careful consideration and consultation with haematology and obstetric medicine. On first attempt at discharge cellulitis was noted at the wound site *(image 2)*.

Week 4 She remained in hospital on triple antibiotics for a further week and was discharged home. The bacterial swab from the wound demonstrated growth of *S. aureus*.

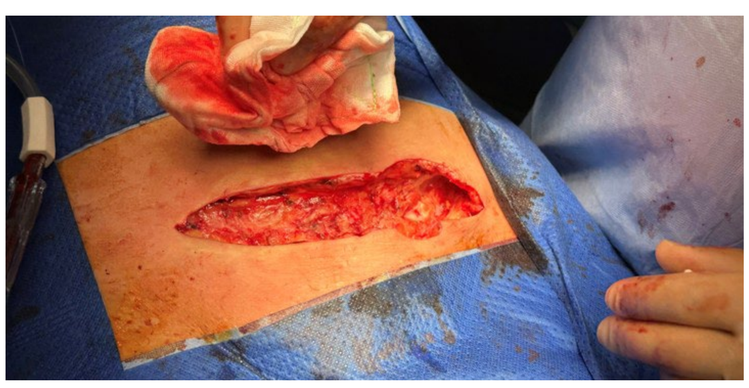

Image 1 – surgical debridement

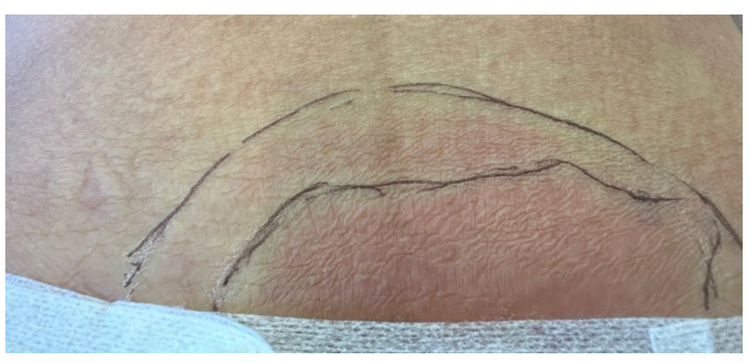

Image 2 – recurrence of cellulitis

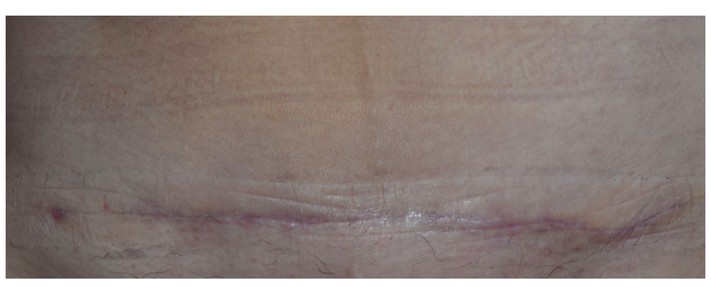

Image 3 – wound healing

Discussion

The rate of caesarean sections is steadily rising around the globe, with Australian rates quoted at 38% as of 2023[1]. In this context it is important to remember that a Caesarean section is major surgery with significant risks of morbidity and mortality, and as per WHO this increasing trend of Caesarean sections has not been associated with significant maternal or perinatal benefits[2]. This case highlights an extremely rare, but possible, complication following routine caesarean section in a healthy individual.

Necrotising fasciitis is a rare but clinically significant disease process with potentially devastating complications and mortality rates quoted as high as 20-80%[3].

Factors that increase the burden of morbidity and mortality include chronic health conditions, age, immunocompromised status, obesity and IV drug use[4]. Naturally, such predisposing factors are less common in our obstetric population, and necrotizing fasciitis following Caesarean section is reported to be as low as 1.8/1000[4]. The cornerstones of its management are prompt recognition, early commencement of empirical antibiotics and timely and effective surgical debridement.

The case described above exemplifies the inherent risk of a seemingly spurious complication in a low-risk individual and highlights the invaluable support of the multidisciplinary team in providing effective and timely management. It acts as an important reminder to remain vigilant of rare complications in common procedures such as Caesarean sections.

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