



Extensive necrotizing fasciitis of Vulva to anterior abdominal wall- A long roller coaster journey

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Case presentation

A 65-year-old woman presented with history of feeling unwell and shortness of breath for a duration of one week. She had type 2 diabetes, hypertension, diverticulosis, irritable bowel syndrome, anxiety/depression, glaucoma, osteoarthritis and history of pulmonary embolism. She was a chronic smoker, with limited mobilization with the aid of walker and BMI of 46. She was found to be in respiratory distress and generalised wheeze, with stable vitals, no signs of deep vein thrombosis. Local examination revealed a black necrotic lesion about 15cm x 4cm with loss of sensation and a blister superior to it.

Differential Diagnosis

The baseline investigations showed features of hyperglycemia, sepsis and acute kidney injury. Community acquired pneumonia and pulmonary embolism were ruled out with a normal chest X- ray, ECG and oxygen saturation. Diabetic Ketoacidosis was ruled out in the absence of ketonuria. The presence of necrotic lesion in the vulva pointed towards a soft tissue infection. As the patient was in septic shock, a joint decision along with anaesthetic input was made to stabilize the patient and transfer to theatre for a wound debridement to confirm and treat the evolving features of necrotizing fasciitis. Clinical decision was considered over imaging such as CT or MRI to avoid delay in treatment. (1) The patient’s complex co-morbidities mandated aggressive supportive treatments.

Management

Extensive debridement took place under a joint effort of gynaecologist, general surgeons, vascular surgeon and intensive care team with the aim of removing all necrotic tissue. The dissection extended from anterior abdominal wall to deeper planes of groin and involved the rectus muscle, external oblique aponeurosis, right inguinal ligament and area around clitoral hood and vulva, sparing perianal area. The patient required cardioversion intraoperatively, intensive care support during recovery. Patient returned to theatre thrice for staged debridement. A second look surgery with wound closure and drain insertion was done after stabilization. The wound swab isolated- Coagulase negative Staphylococcus - Staph lugdunensis. The recovery was further complicated by pulmonary embolism, hospital acquired pneumonia, clostridium difficile infection, hypomagnesemia, wound dehiscence and bed sores. The above led to major mental health deterioration. A joint care involving tissue viability nurses and mental health team was provided throughout her stay. After a long stay of 4 months, the patient was discharged to the community to be supported by community nurses and endocrine team for residual wound care, diabetes, hypomagnesemia and mental health.

Initial presentation



Discussion

Necrotising soft-tissue infections are rapidly progressing, life-threatening infections with involvement of any or all layers of soft tissue compartment like dermis, subcutaneous tissue, fascia, or muscles and can be associated with sepsis and even mortality. The worldwide incidence of necrotising soft-tissue infections is 0.2 to 6.9 per 100,000 person-years. This has not been accurate due to multiple terminologies used, varied clinical presentations and lack of national reporting guidelines (2). The Laboratory Risk Indicator for Necrotising Fasciitis (LRINEC) is a clinical tool where a score more than 6 indicates high risk of necrotizing soft tissue infection. It includes: C-reactive protein (CRP), total white cell count, hemoglobin, serum sodium, creatinine and glucose measured at initial presentation. (3) Its use is controversial as a prognostic indicator but useful for diagnosis. (4) A diverting colostomy or a fecal management system is considered to reduce the risk of wound contamination with gut bacteria. (5) In our patient, a fecal management system was used. There is inadequate data and need of further evidence to prove efficacy of hyperbaric oxygen, IVIG, Vacuum therapy and skin grafting in wound healing and recovery in necrotizing fasciitis. (2)(6)(7) Patient support groups can provide peer support to patients and next of kin. They can also obtain important patient-centered feedback during the recovery. (8)

Post operative



Wound dehiscence



Learning Points

This case makes a classic example of an effective teamwork in management of this fulminant disease in a near miss case.

- As the diagnosis is clinical, one must always keep the differential diagnosis in mind when evaluating cases of sepsis where the source is not apparent initially.
- Though surgical debridement is key, antibiotics and supportive treatment play a vital role in holistic treatment.
- Prompt identification and action is essential.
- Multidisciplinary management and teamwork are exceptionally important in patients with several comorbidities including hospital and community support teams.

References and acknowledgement

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