

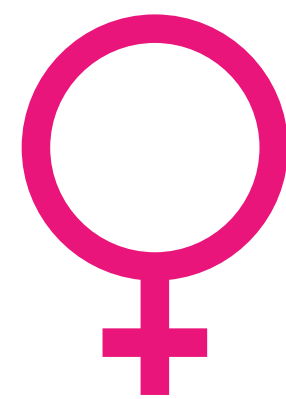
Necrotising Fasciitis or Pyoderma Gangrenosum : A Post-Op Dilemma

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1. INTRODUCTION

- Pyoderma gangrenosum (PG) is a rare, rapidly progressive, autoinflammatory ulcerative skin and soft tissue condition.
- Necrotizing Fasciitis (NF) is a polymicrobial, severe soft tissue infection that progresses rapidly penetrating to muscles and fascial planes.
- Both conditions can present with similar features, making early differentiation challenging.

2. PRESENTATION:



36-year-old
P2+3
BMI:33 kg/m2

Past h/o episiotomy wound infection, so she chose caesarean section this time.

She presented to triage 4 days Post CAT-4 CS with significant erythema, serous discharge and wound gaping
Past medical History: Raynaud's disease, Protein C deficiency

3. CASE HISTORY

- Initially admitted with provisional diagnosis of post-operative wound infection, IV antibiotics were commented.
- Day 2 of admission: suspicion of necrotising fasciitis (NF) due to black necrotic areas above the wound.
- Wound debridement was done twice by the surgeons.
- Despite antibiotics and wound debridement, inflammatory markers kept rising and the wound failed to improve.
- On reviewing clinical history again, the patient mentioned a long-standing history of easy bruising, abscess formation and multiple visits to A&E after minor injuries.
- This prompted consideration of non-surgical and autoimmune causes.
- Dermatology and Medical Consultation was sought.
- Skin biopsy and histology confirmed the diagnosis of Pyoderma Gangrenosum (PG)
- Tx with systemic corticosteroids showed consideration improvement and wound healing.

4. IMAGES



4. DISCUSSION:

•This case highlights the difficulty in differentiating necrotising fasciitis from Pyoderma gangrenosum in post operative wound infections.
Early DX of NR and aggressive wound debridement are crucial for reducing morbidity and mortality. Oh the other hand, surgical debridement is not a recommended treatment of PG.
Its important to diagnose PG early as timely management is paramount.

Necrotising Fascitis	Pyoderma Gangrenosum
- Secondary to infections - Crepitation on examination. - Purulent discharge and haemorrhagic bullae - Blood Cultures and tissue cultures can be positive - Histopathology shows gangrenous necrosis - Requires aggressive surgical intervention and antibiotics.	- Is not an infection. - No crepitation on examination. - Blood cultures and tissue cultures generally negative. - Histopathology shows neutrophilic dermatoses - Typically responds to systemic corticosteroids

5. LITERATURE REVIEW:

- Pyoderma gangrenosum (PG) is an autoinflammatory skin disease mediated by an altered neutrophilic response characterized by an increased presence in the skin and soft tissue.
- It is thought to result from an abnormal immune response comprising exaggerated neutrophil response, mutagenic changes, and dysregulation of the innate immune system.
- Studies from different parts of the world differ on the exact incidence of PG; it is estimated to be 5.8-20/100,000, with twice as many females affected as males [1,2,3].
- Interestingly, the aetiology spans a wide spectrum of causes, with 49% developing PG spontaneously, 27% following minor trauma, and 17% following surgery.

5. LITERATURE REVIEW:

As there is no definitive test for the diagnosis of PG, it is unfortunately misdiagnosed about 10% of the time. [1]

One study found that T-cells, such as clusters of differentiation CD3+, CD163+, and macrophages, play a major role in inflammation as they have been found in the edges of ulcers in those with PG.
The subsequent cytokine signalling by these misplaced congregation of T-cells, like interleukin (IL) IL-8, IL-17, and IL-23, all play a role in the abnormal neutrophil response observed in these patients
IL-8 is a chemotactic mediator of neutrophils, IL-17 proliferates near the lesion itself, and IL-23 also activates neutrophils [4,5].

The chemical storm that is inappropriately occurring, neutrophil chemotaxis to the area, leads to the pathognomonic picture that occurs with PG.

6. CONCLUSION:

- Pyoderma Gangrenosum (PG) is a rare disease that O&Gs don't encounter frequently.
- In non healing wounds, a high index of suspicion, thorough history, with early MDT discussion, are essential to avoid morbidity and ensure appropriate immunosuppressive therapy.
- Clinician should always consider PG in atypical or non-responsive wound infections.
- This case highlights the critical importance of early recognition and differentiation as mismanagement - surgical debridement - can exacerbate PG.

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