

# Post-surgical pyoderma gangrenosum: A systematic review of clinical characteristics and management

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### What is post-surgical pyoderma gangrenosum (PSPG)?

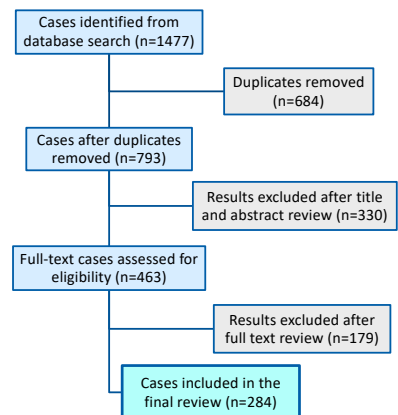
PSPG is a rare, rapidly progressive, non-infectious neutrophilic dermatosis in which surgical trauma triggers a painful cutaneous ulcer at the surgical site, and which can lead to severe consequences if not recognized and treated promptly.

### Methods

Study selection process:

**Inclusion criteria:**

- Population: All age groups, both sexes
- Symptom onset within 30 days after surgery or intervention
- Time interval from intervention to symptom onset reported
- Diagnosis of PSPG clearly described



### Results


**Demographics:**  
n=184 cases  
65% female  
Mean age: 51 years  
Symptom-Onset: Ø 8.5 days after surgery

**Patient related risk factors:**  
Autoimmune disease (e.g. colitis ulcerosa), haematologic disease (e.g. MDS), history of PG, rheumatoid arthritis.

### Clinical features of PSPG:

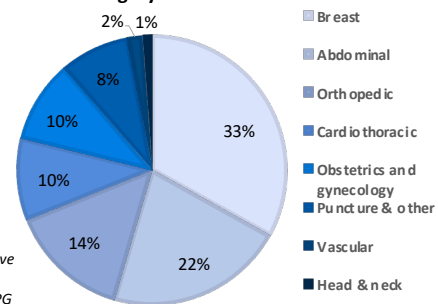
- Pustules, bullae
- Ulceration with violaceous, undermined borders
- Rapid expansion, necrotic ulceration

**Histology:** Sterile neutrophilic infiltrates



Source: Brooklyn TN et al. Gut. 2006;55:505-9. doi:10.1136/gut.2005.074815

### Surgery distribution



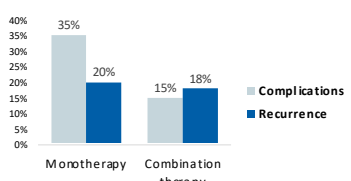
### Treatment & Outcomes

**Corticosteroids** average duration 98 days

**Combination therapy (corticosteroids + another agent)** such as cyclosporine, dapsone, IVIG):

→ Fewer complications (p < 0.0097)

→ Recurrence rates: not significantly different (p ≈ 0.075)




Treatment	Complications (%)	Recurrence (%)
Monotherapy	35%	20%
Combination therapy	15%	18%

### Differential Diagnoses


- Surgical site infection
- Necrotizing fasciitis
- Abscess
- Cellulitis
- Fat necrosis

### Case report: 35 y/o female, 10 days post liposuction abdomen & back


**Day 1:** Pustules and bullae at the surgery site (10 days post-surgery)




**Day 7:** Ulceration with violaceous, undermined borders; rapid expansion



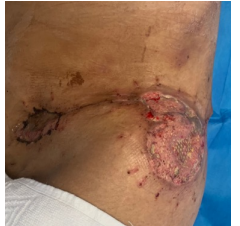
**Day 13:** Start of corticosteroids



**Day 14:** Drastic improvement within hours after corticosteroids



**Day 29:** Complete healing after corticosteroids, débridement, local flap and STSG



### Take-home Messages

- PSPG typically occurs within the first 2 weeks after surgery.
- Patient-related risk factors include autoimmune disease, hematologic disease, a history of PG, and rheumatoid arthritis.
- Early recognition is crucial, since misdiagnosis can lead to severe outcomes.
- Corticosteroids remain the primary treatment and combination therapy can reduce complication rates.
- Awareness of risk factors and differential diagnoses improves patient outcomes.