

Pyoderma gangrenosum of the hand: a case series and literature review of clinical presentation and management

Jiayi Hu MD, Wendy Ng MD, Zhen Meng MD, Edward Liu MD, Achilles Thoma MD, Michael J Cooper MD

Background

Pyoderma gangrenosum (PG) is an extremely rare condition and often not considered in the differential diagnosis of hand wounds. This may lead to delayed diagnosis that causes prolonged and unnecessary morbidity. Herein, we present a case series of PG involving the hands to better appreciate the clinical features in order to guide an accurate diagnosis. This is the largest case series of this condition to date.

Methods

A retrospective chart review between 1995 and 2015 was carried out at our institutions. Eight patients were identified to have biopsy proven PG involving the hand. Clinical data were collected which include patient demographics, location of lesion, past medical history, and clinical management. Also, an extensive literature review of case reports was carried out by searching “pyoderma gangrenosum” and “hand” using various databases limited to English language (MEDLINE, EMBASE, and PubMed), followed by screening reference lists of database search results. Relevant clinical data were then collected.

Results

Our study had 6 females and 2 males with ages ranging from 35 to 62. All patients were initially diagnosed as having infections, and had received a combination of antibiotics and/or surgical debridement. Only one patient's wound culture showed bacterial growth. One patient had an unusual presentation of PG involving all four extremities. Two patients' wounds involved the dorsum of the left hand only. Interestingly, four of the remaining five patients demonstrated PG exclusively to the index fingers. Once steroid was administered, either intralesional or systemic, all lesions showed clinical improvement of wound healing.

Our literature search revealed 23 other cases. Five patients had index finger involvement exclusively. 15 patients experienced extensive hand involvement. The affected sites for the remaining three patients were: index/long fingers (right hand), index (right hand) and ring/small (left hand), and long (left hand). All 23 cases were initially misdiagnosed as infection, similar to our case series.

The management of PG is multimodal, which includes local and systemic anti-inflammatory measures, negative pressure wound therapy, hyperbaric oxygen, and skin grafting. Surgical debridement has a limited role.

Conclusion

PG of the hand is a rare condition that, unfortunately, is commonly misdiagnosed as infection. The index finger seems to be the most involved digit. It could be due to its great independence that it is prone to minor trauma.