Title: Verrucous Plaques of the Buttocks, Perineum, and Umbilicus

Short title: Verrucous Plaques on Genitalia

Authors:
Julie M Bittar, BA[1]; Kyle Burton, MD[2]; Sahand Rahnama, MD, MS [3]†

1- Medical Student, Indiana University School of Medicine, Indianapolis, IN

2- Resident Physician, Department of Dermatology, Indiana University School of Medicine, Indianapolis, IN

3- Assistant Professor of Dermatology and Internal Medicine, Department of Dermatology, Indiana University School of Medicine, Indianapolis, IN

†- Corresponding author

Grant Support: None

Abbreviations: CC: Cutaneous Crohn's

Address Correspondence To:
Sahand Rahnama-Moghadam MD, MS
Assistant Professor of Dermatology and Internal Medicine
Methodist Dermatology--Inpatient Service
Indiana University
545 Barnhill Drive, Indianapolis, IN 46202
Email: srahnama@iupui.edu

Disclosures / Conflicts of Interest: None

Transcript Profiling: None

Writing Assistance: None

Consent for Publication: All authors consent to the publication of this manuscript.

Author Contributions:
JB – Study concept and design, Acquisition of data, Analysis and interpretation of data, Drafting of the manuscript

KB – Study concept and design, Acquisition of data, Analysis and interpretation of data, Critical revision of the manuscript for important intellectual content

SR – Study concept and design, Analysis and interpretation of data, Drafting of the manuscript, Critical revision of the manuscript for important intellectual content, Study supervision

---

Question/Case:

History: A 42-year-old woman presented with a 2-year history of verrucous plaques on her buttocks, perineum, and umbilicus. The lesions were minimally tender, and the patient was specifically without diarrhea, abdominal pain or hematochezia. Outside biopsy had suggested the diagnosis of verrucous carcinoma.

Physical Exam: Within the intergluteal cleft and medial buttocks was a verrucous plaque extending toward the perineum (Figure A). On the perineal regions and mons pubis (Figure B) were additional verrucous and edematous plaques. Within the umbilicus and periumbilical area were malodorous verrucous plaques (Figure C). A knife-cut ulcer was present within the right inguinal fold (Figure D).

Laboratory findings: T spot negative x 2; Serology for histoplasma, coccidioidomycosis, and Cryptococcus all negative; RPR negative; Negative colonoscopy and endoscopy.

Histopathology: Buttocks x2, small noncaseating granuloma in superficial and deep dermis. Focal suppuration with neutrophils, epidermal hyperplasia and sinus tract formation. PAS, GMS, Fite, all negative. (Figure E: H&E stain 4x), (Figure F: H&E stain 10x), (Figure G, H&E stain 20x)

Initial clinical course: Treatment with infliximab was initiated yielding significant improvement with pain and drainage. What is the diagnosis?

Answer: Cutaneous Crohn's Without Internal Involvement

Crohn's disease (CD) is a chronic inflammatory disease of the gastrointestinal tract that classically presents with varying degrees of cutaneous involvement designated as cutaneous Crohn's disease (CC), also known as Metastatic Crohn's disease. Cutaneous presentation is rare, with less than 100 reported cases.[1] Lesions may present variably, but have been described as erythematous and sometimes painful plaques or violaceous, lichenoid papules, most often on the legs, vulva, penis, trunk, and face.[2]

CC is often associated with concurrent gastrointestinal Crohn's disease, however approximately 20% of CC patients have never been diagnosed with gastrointestinal disease. CC may precede gastrointestinal involvement by 3 months to 8 years.[1] Histopathologically, CC appears similar to gastrointestinal Crohn's disease with noncaseating granulomas with Langerhans giant cells, epithelioid histiocytes, and plasma cells.[3]

Biopsy, as well as cultures, may help differentiate CC from other diseases. Differential diagnoses for CC could include verrucous disease, (as was the initial diagnosis in this case), hidradenitis suppurativa, and pyoderma gangrenosum. Granulomatous histology could invoke cutaneous sarcoidosis, tuberculosis, syphilis, and a variety of alternative infectious causes.[2]

Management options from hyperbaric oxygen, to topical steroids, applied multiple times daily, and more standard Crohn's disease treatments such as infliximab, have resulted in improvement in previous cases of CC. Our patient was treated with infliximab and showed significant improvement.

References

1. Bolognia J, Schaffer JV, Cerroni L. Dermatology. 2018.

2. Aberumand B, Howard J, Howard J. Metastatic Crohn's Disease: An Approach to an Uncommon but Important Cutaneous Disorder. *BioMed research international.* 2017;2017:8192150.

3. Schneider SL, Foster K, Patel D, Shwayder T. Cutaneous manifestations of metastatic Crohn's disease. *Pediatric dermatology.* 2018;35(5):566-574.