***no patient handout*

Ecthyma - Skin

Synopsis

Ecthyma is an ulcerative bacterial skin infection caused by group A beta-hemolytic streptococci and often secondarily associated with staphylococci. As ecthyma often begins superficially and extends into the dermis, it is often referred to as a deeper form of impetigo. Clinically, the lesions of ecthyma appear as vesicles or pustules that ulcerate and crust over. The lower extremities are sites of predilection. Immunosuppression, poor hygiene, overcrowding, malnutrition, humidity, and pre-existing trauma to the tissues all predispose one to infection. It is more common in the extremes of age.

Codes

ICD10CM:
B08.8 – Other specified viral infections characterized by skin and mucous membrane lesions

SNOMEDCT:
85791004 – Ecthyma

Look For

The lesions commonly begin as small, fluid-filled vesicles that are usually found on the shins, legs, or buttocks. As the vesicles enlarge, they rupture, and a thick gray-yellow crust covers the lesion. If the crust is removed, a superficial ulcer is revealed that has a depressed, raw base and raised edge. The ulcers will heal within a few weeks but leave scarring. Variants include pustules and vesiculopustules evolving into superficial punched-out ulcers with overlying moist or greenish-yellow crust or eschars. There can be a violaceous border.

Diagnostic Pearls

Lesions characteristically may persist for weeks to months with adherent crusts, especially on the lower legs. They may be few in number without other obvious signs of cellulitis.

Regional lymphadenopathy is commonly present.

Differential Diagnosis & Pitfalls

- The disorder is similar to streptococcal **non-bullous impetigo** but is differentiated by deeper components.
- Ecthyma should be differentiated from **ecthyma gangrenosum**, which is caused by *Pseudomonas* sepsis and is potentially life threatening and evolves over hours to days.
- **Methicillin-resistant *Staphylococcus aureus* (MRSA) infections**
- **Pyoderma gangrenosum**

- ***Mycobacterium marinum*** infection
- Leishmaniasis (**Old World** and **New World**)
- **Insect bite reactions**
- **Sporotrichosis**
- **Lymphomatoid papulosis**
- Papulonecrotic tuberculid
- **Tungiasis**
- **Venous stasis ulcer** or **ischemic ulcer**

Best Tests

Gram stain and culture of lesions will reveal gram-positive cocci representing group A streptococci with or without *S. aureus*.

Treatment without these studies is reasonable in typical cases.

Skin biopsy is rarely needed but, if performed, will show dermal necrosis and inflammation with a granulomatous perivascular infiltrate.

Management Pearls

Manage with systemic antibiotics and aggressive saline soaks / wet compresses to remove crusts. Advise patient that lesions may leave atrophic scars.

Proper hygiene is the most important measure in the prevention of ecthyma.

Nonsuppurative complications of streptococcal skin infections include glomerulonephritis and scarlet fever.

In the US, infections due to invasive Group A *Streptococcus* are reportable in all states **except** AL, CO, MS, MT, ND, OR, and UT.

Therapy

Treatment is similar to that for impetigo. Per IDSA 2014 guidelines, treatment for ecthyma should be an oral antimicrobial for 7 days. Dicloxacillin or cephalexin is recommended, as *S. aureus* isolates from ecthyma are usually methicillin susceptible:

- Dicloxacillin 250 mg p.o. 4 times daily for 1 week, or
- Cephalexin 250 mg p.o. 4 times daily for 1 week, or

- Erythromycin 250 mg p.o. 4 times daily for 1 week.

Standard cephalosporins and penicillins are of no benefit in treating MRSA. If MRSA is suspected or confirmed, doxycycline, clindamycin, or sulfamethoxazole-trimethoprim is recommended. Inducible resistance to clindamycin should be excluded by performing a D-zone disk-diffusion test.

- Clindamycin 300-400 mg p.o. 4 times daily for 1 week.

Critically ill patients with MRSA or suspected MRSA should receive vancomycin or linezolid.