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Case Report: Erysipelas Diagnosed in the Emergency Department

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Abstract

Here we present a case of Erysipelas. Also known as St Anthony's fire, Erysipelas is a common and potentially dangerous infection. It involves the dermal layer of the skin but may also extend to the superficial cutaneous lymphatics. It is characterized by a relatively fast onset and a well define border. The most common site are lower extremities with face being second. Much feared and often fatal in the pre-antibiotic era, it responds well to antibiotics today and most people have a full recovery without complications. [1,2]

Case Presentation

A 57-year-old male presents to the ER for evaluation of facial redness. Onset was this morning upon awakening. Patient reports that he did not have any of the symptoms yesterday. The symptoms were associated with nausea and vomiting, His emesis was non-bloody . He denied abdominal pain, fevers, meningismus, angioedema, respiratory complaints, and cough. No trismus, drooling, voice changes. No changes to his medication. The patient was noted to have well-defined erythematous area around the malar region stretching all the way to the area surrounding his lips. It does not involve any oral mucosa and there is negative Nikolsky sign. No bleeding was observed. No other rashes anywhere in particular on the hands and feet.

Upon presentation, His vital signs included a blood pressure of 105/56 mmHg, heart rate of 89 beats per minute, respiratory rate of 17 breaths per minute, temperature 99.4 degrees Fahrenheit orally, and a pulse oximetry of 94% O2 saturation on room air. His Body Mass Index was 21.3 kg/M².

Physical examination further revealed a well-developed, non-ill appearing and non-toxic appearing male with a facial rash as described above. His oropharynx is clear. Uvula is midline. There is no pharyngeal swelling, oropharyngeal exudate, posterior oropharyngeal erythema, or uvula swelling. There is no tonsillar exudate or tonsillar abscesses. He is alert and oriented to place, person and time, his neurological assessment is within normal limits. His head is normocephalic and atraumatic. His pupils are equal and equally reactive to light with extraocular muscles intact. There are no murmurs heard on auscultation.

A complete blood count (cbc), basic metabolic panel, blood culture and lactate were obtained. His cbc showed an elevated white blood count of 17.0 B/L. His Hemoglobin was 11.9, consistent with his baseline. He was hyponatremic with a sodium of 130 mmol/L and hypochloremic with a chloride level of 95 mmol/L. His creatinine was mildly elevated at 1.29 mg/dL. He received fluid resuscitation with 2750 mL of 0.9% normal saline for his electrolyte abnormalities. He was also given ondansetron, famotidine his gastrointestinal symptoms. For his facial infection he received antibiotics in the form of a 1500 mg dose of IV Vancomycin and 1 tablet of 875-125 mg amoxicillin-clavulanate. He also received a dose of Decadron and loratadine. His gastrointestinal symptoms improved, and he was discharged with a 10-day course of 875-125 mg amoxicillin-clavulanate, 7-day course of 100 mg Doxycycline and as needed ondansetron . He was asked to follow up with his primary care physician and was given extensive return precautions. He returned to the emergency department the following month for a complaint of constipation at which point his rash had completely resolved.



Figure 1: A 57-year-old man with a well demarcated erythematous patch on the central face with indurated borders.



Figure 2: left side view of a well demarcated erythematous patch consistent with Erysipelas.

Discussion

The differential diagnosis for erysipelas can be wide. As many conditions can present with erythema, warmth, and edema. Some of the more common are cellulitis, erysipeloid, impetigo, herpes zoster and necrotizing fasciitis.

Erysipelas typically presents with an onset over hours and a well-defined boarder. Cellulitis is similar to erysipelas. however, it presents with a less-well defined border and an onset over days. Cellulitis is a deeper infection with involvement of skin and soft tissue. It often involves fascia, muscles, and tendons.

Erysipeloid presents as a bright red or purple well demarcated plaque with a shiny surface on the webs of fingers or hands. It typically presents in fishermen, fish handlers, butchers, and people in contact with raw seafood or uncooked meat. Impetigo is classically a small cluster of vesicles around the nose, mouth, forearms, and hands that burst to form honey-colored crusts. Meanwhile a herpes zoster infection presents as an erythematous, vesicular rash along a single dermatome. A rash involving the face can be particularly difficult to distinguish from erysipelas. In these cases, cultures, Tzank smear and presence of bell's palsy can be helpful in differentiating HZV infection from erysipelas.

Necrotizing fasciitis is a rapidly spreading infection involving the deep fascia and the subcutaneous tissue that eventually leads to necrosis. It is a possible complication of erysipelas. The infection starts similarly to erysipelas with erythematous skin that within hours to days becomes dusky with bullae formation. This changes quickly to necrosis and gangrene. It can be accompanied by crepitus from the gas-producing infectious organisms that typically cause it. Common predisposing factors are diabetes and soft tissue injury. If prompt treatment is not given patients can develop fevers, systemic toxicity, shock and may result in death. Computed tomographic images can help delineate the extent of the injury and wound cultures can help guide choice of antibiotics. Unlike erysipelas, necrotizing fasciitis is a surgical emergency requiring debridement, fasciotomy and in some cases amputation of the affected limb. Treatment with IV antibiotics is mandatory and even then, mortality can be as high as 70%. [1]

Conclusion

Erysipelas is a common and usually easily treatable condition if handled early. It is a clinical diagnosis and mainstay of treatment is with antibiotics. Penicillin is the first line choice with erythromycin preferred in penicillin allergic patients. Immunocompetent patients are usually treated on an outpatient basis with 10 days of antibiotics. Laboratory work up and cultures should be considered in immunocompromised, ill appearing patients. Along with intravenous drug users, patients with prosthetic heart valves and those with intravascular devices as these patients are more susceptible to complications.

Potential complications include septicemia, meningitis, endocarditis, shock and necrotizing fasciitis. Hospitalization is recommended in immunocompromised patients and those presenting with signs of complications.

References

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