

Perianal Streptococcal Infection

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A 3-year-old boy is brought to the ED for evaluation of perianal desquamation.



Figure. Photograph of the patient's perianal region showing the area of desquamation.

Case

The mother of a 3-year-old boy presented her son to the ED for evaluation after she noticed peeling of the skin in his perianal region. She stated that the peeling had started 1 day prior to presentation. Two days earlier, the mother had brought the same patient to the ED for evaluation of a fever, sore throat, and a slight rash over his face. The boy's vital signs at the initial presentation were: temperature, 101.8°F; heart rate, 102 beats/minute; and respiratory rate, 28 breaths/minute. Oxygen saturation was 98% on room air.

During this first visit, the mother denied the child having had any fever, chills, headache, sore throat, facial rash, joint pain, or pain on defecation. He had no significant medical history and no known drug allergies. After examination, a throat culture was taken, and the patient was given acetaminophen and discharged home with a diagnosis of viral syndrome.

At the second presentation, physical examination revealed a well-developed child in no distress. The examination was negative except for a 4 x 2 cm area of desquamation present over the perianal region (Figure).

The area of desquamation was dry, mildly erythematous without discharge, and

nontender. The patient's vital signs at this presentation were stable, and he was afebrile. The remaining physical examination findings were normal. The throat culture taken during the first ED presentation was reported as negative. A perianal swab was sent for culture and sensitivity. This was later reported to be positive for group A β -hemolytic streptococci (GABHS), which is sensitive to penicillin. The patient was discharged home in the care of his mother with a prescription of penicillin. A 10-day follow-up showed complete resolution of the skin rash.

Discussion

Perianal streptococcal dermatitis (PSD), which is caused by GABHS, is a frequently overlooked medical entity. Landolt et al¹ investigated the prevalence of PSD at the University Children's Hospital Basel, Switzerland, from October 2000 to May 2001. In this study, 250 randomly selected patients were studied for signs of PSD by history, examination, and culture, the results of which showed that PSD was frequent in the study cohort. The study further underscored that, to appropriately treat affected patients, signs and symptoms of PSD should be searched for systematically.¹

The rash in this case was most likely the result of scarlet fever with an unusual presentation of PSD; the signs and symptoms of which include perianal erythema, itching, rectal pain, sometimes blood-streaked stools, rectal bleeding, irritation or pruritus, tissue loss and exudation, secondary constipation, and cellulitis. Perianal streptococcal dermatitis has also been described in the adult literature.² As with pediatric cases, PSD in adults is usually caused by GABHS.

Evaluation and Diagnosis

A rapid streptococcal test of suspicious areas can confirm the diagnosis. Fever, sore throat, and arthralgia are rare; however, culture from the perianal region grows GABHS. Titers are usually not elevated in

laboratory evaluation. A routine skin culture is an alternative diagnostic aid.

Brilliant² described the bright red color of PSD as a sharply demarcated rash that is caused by GABHS. As previously stated, symptoms include perianal rash, itching, and rectal pain; blood-streaked stools may also be seen in one-third of patients. It primarily occurs in children between 6 months and 10 years of age and is often misdiagnosed and treated inappropriately.³

Prompt diagnosis of GABHS is important. If untreated, it can cause serious systemic infections, especially in elderly and in newborn patients. Treatment with antibiotics resolves the condition in the majority of patients.² In the acute stage, a white pseudomembrane may be present. As the rash becomes more chronic, the perianal eruption may consist of painful fissures, a dry mucoid discharge, or psoriasiform plaques. Perianal dermatitis can also be caused by *Staphylococcus aureus* or *Candida*. Confirmation of the diagnosis is accomplished by culturing a moderate-to-heavy growth of GABHS on 5% sheep-blood agar.

Treatment

A 10-day course of oral penicillin produces resolution of the dermatitis and other symptoms in most patients, but a relapse rate as high as 39% has been reported. Other treatment plans include amoxicillin, 40 mg/kg per day, divided into three doses, and/or topical applications of mupirocin 2% three times per day for 10 days. Penicillin, clindamycin phosphate, and erythromycin have also been used.

Although penicillin is generally recommended for treatment of GABHS infection, amoxicillin is often better tolerated in the pediatric population due to its superior palatability. Early antibiotic treatment causes a dramatic and rapid improvement of symptoms. However, according to Olson et al,⁴ PSD initially treated with amoxicillin or penicillin is consistently associated with a high risk of clinical recurrence.

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Whether treatment with a β -lactamase-resistant agent reduces this risk is uncertain.

Conclusion

This case represents an unusual presentation of scarlet fever manifesting as perianal dermatitis caused by GABHS. Although more common in the pediatric population, adult cases have been documented in the literature. As this case illustrates, early recognition and treatment with penicillin (or amoxicillin) produces rapid improvement and resolution of symptoms.

References

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