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# Conjunctival petechiae in infective endocarditis



**Figure 1.** Petechial hemorrhage in the palpebral conjunctiva of the right lower eyelid.

A 75-YEAR-OLD-MAN presented with a 33-day history of intermittent nocturnal fevers of 39°C (102°F) and truncal rashes. He had a history of paroxysmal atrial fibrillation, hyperlipidemia, and benign prostatic hyperplasia. He had been taking only the alpha-1 blocker naftopidil for benign prostatic hypertrophy.

The fevers initially persisted, but temporarily resolved after the patient took clarithromycin 200 mg twice daily for 4 days early after fever onset. He finished taking the clarithromycin 7 days after fever onset. The fevers recurred the day after he finished the clarithromycin prescription and became sustained, even with acetaminophen. Acetaminophen 600 mg daily was prescribed on day 20, and, because of insufficient

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**Figure 2.** Irregular macular erythema distributed on the patient's abdomen.

antipyretic effect, the dose was increased to 1,200 mg daily, which was taken on day 30.

The truncal rashes were thumbprint-sized with pale-pink margins and without scales, pain, or itching. They appeared on the same day as the fever, and persisted for the entire period, even during the patient's afebrile periods.

The physical examination was notable for petechial hemorrhage on the right palpebral conjunctiva (**Figure 1**) and erythematous macules distributed over the abdomen to lower back (**Figure 2**). No cardiac

murmur, lymphadenopathy, mucosal ulcers, or lesions on the arms or legs were observed. There were no notable findings on the fingers or nails suggestive of infectious endocarditis, including Osler nodes, Janeway lesions, and splinter hemorrhages. The patient's oral hygiene was poor. He had 4 teeth, all with associated gum inflammation.

Results of laboratory testing were as follows:

- White blood cell count  $6.7 \times 10^9/L$  (reference range 3.3–8.6), with 79% neutrophils, 14.8% lymphocytes, 5.8% monocytes, and 0.1% eosinophils
- Hemoglobin 12.4 g/dL (13.7–16.8)
- Platelet count  $158 \times 10^9/L$  (158–348)
- Lactate dehydrogenase 218 U/L (100–225)
- Blood urea nitrogen 17 mg/dL (8–20)
- Creatinine 0.91 mg/dL (0.61–1.13; patient's baseline level was 0.72–0.81 mg/dL)
- Brain natriuretic peptide 77.8 pg/mL (< 18.4)
- Ferritin 555.7 ng/mL (23–250)
- Erythrocyte sedimentation rate 79 mm/h (1–7)
- C-reactive protein 5.4 mg/dL (< 0.3)
- Procalcitonin 0.23 ng/mL (< 0.05).

Testing for rheumatoid factor, antinuclear antibodies, and antineutrophil cytoplasmic antibodies was negative. Urinalysis revealed mild proteinuria (1+) and microscopic hematuria (30–49 blood cells per high-power field). No white cell or blood cell casts were observed. Three sets of blood cultures were positive for *Streptococcus mitis*, an oral bacterium.

Transesophageal echocardiography revealed a vegetation 9 mm by 2 mm on the right coronary cusp of the aortic valve, diagnosed as left-sided infective endocarditis. Contrast-enhanced brain magnetic res-

onance imaging revealed 3 mycotic aneurysms and multiple cerebral microhemorrhages.

The patient received intravenous penicillin G and underwent extraction of the teeth, and the rashes and petechial hemorrhage completely disappeared within 20 days.

## DIFFERENTIAL DIAGNOSIS OF CONJUNCTIVAL PETECHIAE AND ERYTHEMA MULTIFORME

Conjunctival petechiae can be caused by increased venous or capillary pressure in the head and neck, complete venous blockage, or capillary-wall damage.<sup>1</sup> Conjunctival petechiae are observed in situations such as homicidal asphyxia, head injury, asthma attack, epileptic seizure, post partum (after normal delivery), coughing, sneezing, vomiting, and the Valsalva maneuver.<sup>1</sup> The initial differential diagnosis of the conjunctival petechiae in our patient included septic microemboli, adenovirus infection, and vasculitis. Conjunctival petechiae are an uncommon sign of infective endocarditis, with a reported prevalence of 5%.<sup>2</sup>

Erythema multiforme is associated with various infections and drugs.<sup>3</sup> A rare case of erythema multiforme associated with alpha-hemolytic streptococci was reported.<sup>4</sup> Infection with *S mitis* or its proteins may induce the release of cytokines that lead to epidermal tissue damage and may explain our patient's truncal rash.

## DISCLOSURES

The authors report no relevant financial relationships which, in the context of their contributions, could be perceived as a potential conflict of interest.

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