Efficacy of Direct Peripheral Blood Smears in Diagnosing Necrotizing Fasciitis Caused by *Streptococcus pyogenes*

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A 77-year-old woman with liver cirrhosis (Hepatitis C Virus) and diabetes mellitus was transferred to an emergent center in a state of shock. Two hours previously, she had visited an outpatient department complaining of muscle pain in the left lower leg. Overwhelming septicemia was suspected based on an abnormal blood test, and direct Gram staining of the peripheral blood was immediately performed, which revealed Gram-positive cocci (Picture). An emergent exploratory incision confirmed the presence of necrotic tissue, indicating necrotizing fasciitis. Beta-hemolytic *Streptococcus* spp. or *Staphylococcus aureus* were suspected as possible pathogens, and combination treatment consisting of penicillin, clindamycin, meropenem and daptomycin was administered under intensive care. However, the patient died four hours after arrival. The pathogenic organism was later identified to be *emm* type 1 *Streptococcus pyogenes*.

Peripheral blood smears are usually not effective diagnostic tools. However, in cases of extremely severe infection, this technique can be a useful method for making a rapid diagnosis of bacteremia by identifying the pathogen (1, 2).

The authors state that they have no Conflict of Interest (COI).

**References**


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