

[PICTURES IN CLINICAL MEDICINE]

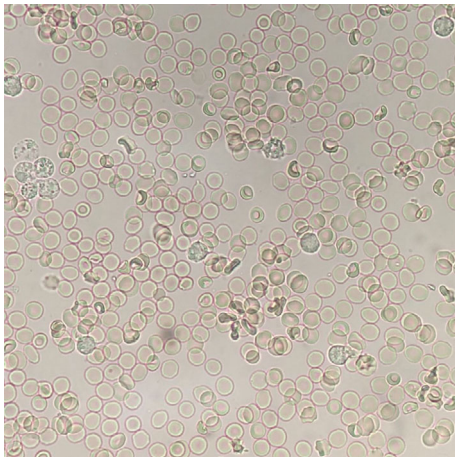
A Sickle Cell Crisis in a Blood Culture Bottle

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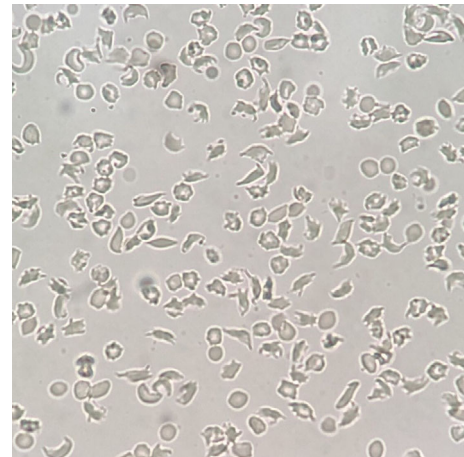
Key words: sickle cell trait, blood culture bottles, splenic infarction

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Picture 1.



Picture 2.

A 38-year-old man presented to the emergency department following a 2-day history of severe left abdominal pain and fever. His symptoms had started while climbing Mt. Fuji, at an altitude of approximately 2,500 m. His medical history was unremarkable. The patient demonstrated tenderness of the left costovertebral angle. Computed tomography revealed a splenic infarction, and his HbA1c level was 2.7%. However, a microscopic examination of a blood smear did not reveal the presence of sickle cells. We hypothesized that the patient's erythrocytes might undergo morphological changes in anaerobic blood culture bottles. Each blood culture bottle was injected with 10 mL of blood and cultured at 35°C. After 24-hour culture, the morphology of the cells in the aerobic (Picture 1) and anaerobic (Picture 2) bottles was

compared; sickle cells were observed only in the anaerobic bottles. This change was not observed in cells from healthy individuals. We used blood culture bottles to diagnose sickle cell trait, which is an original method that has not been reported before. He was discharged after a week. Hemoglobin S was detected subsequently, and the diagnosis of sickle cell trait was confirmed.

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

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