

Glucose-6 Phosphate Dehydrogenase Deficiency in a Geriatric Patient

The Editor,

Sir,

An otherwise healthy 76-year-old female patient presented to the emergency department with acute fatigue, weakness and jaundice. She stated ingestion of roughly 1 kg of boiled fava beans 2 days prior. She had ingested both fresh and cooked fava beans before without any complaints. Her physical examination was unremarkable apart from visible jaundice. No lymphadenopathy was present, splenomegaly and hepatomegaly were not observed. Laboratory results revealed severe anaemia along with indirect hyperbilirubinemia, reticulocytosis, high aspartate aminotransferase and lactate dehydrogenase levels, haemoglobinuria and low haptoglobin. Peripheral blood smear revealed anisocytosis, poikilocytosis and Heinz bodies (Figure).

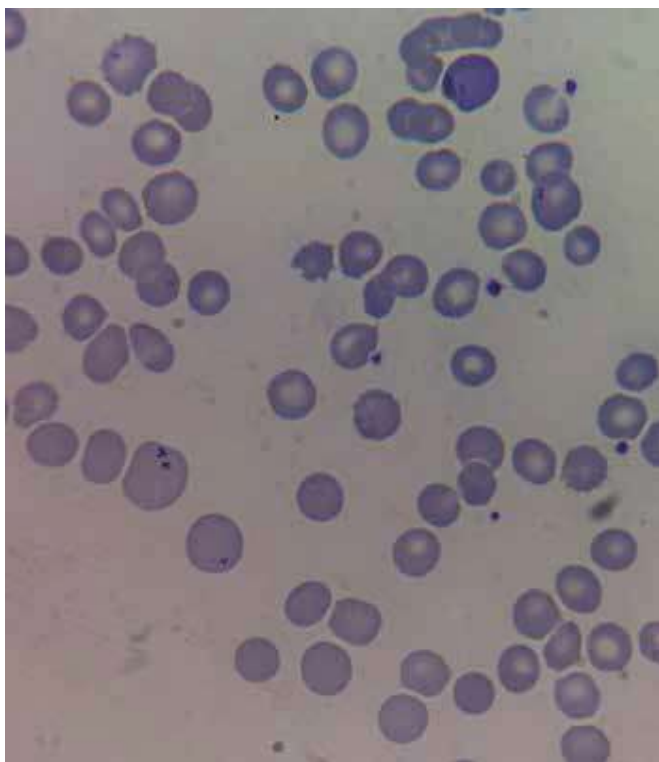


Figure: Peripheral blood smear showed anisocytosis, poikilocytosis and several Heinz bodies.

Direct and indirect Coombs tests were negative. She was diagnosed with non-immune haemolytic anaemia. Etiologic tests revealed a reduced erythrocyte glucose-6 phosphate dehydrogenase (G6PD) level of 1.07 IU/gHb (reference range: 4.1–10.1 IU/gHb). The patient was treated with a presumptive diagnosis of G6PD deficiency. Erythrocyte G6PD level was measured again as 2 IU/gHb after acute haemolytic episode, which confirmed the diagnosis.

Glucose-6 phosphate dehydrogenase is vital for erythrocytes against oxidative stress. Its deficiency is the most common erythrocyte enzyme defect. Deficiency can cause haemolysis episodes triggered by infections, drug use or ingestion of fava beans (1). Herein, we aimed to present a case of G6PD deficiency due to the fava ingestion in a geriatric patient.

The frequency of G6PD deficiency in Turkey varies between 1% and 5%–20% in southwestern Anatolia (2). Most people with G6PD deficiency are not aware of their defect; they are asymptomatic until their first attack. The attack may be triggered due to infections, metabolic conditions, drugs or ingestion of fava beans (3). Favism is generally a paediatric disease and is rarely newly diagnosed in geriatric patients. Favism can develop after ingestion of dried or frozen beans; however, it is mostly associated with fresh beans (4). Not all patients experience favism after ingesting fava beans, and same individual may have different reactions in different times (3).

Glucose-6 phosphate dehydrogenase deficient cells are lysed during acute haemolytic attack, which may cause a normal measurement of erythrocyte G6PD levels; however, G6PD level of patients with favism may be low during acute episode. In the Mediterranean type G6PD deficiency, young erythrocytes are as deficient as older erythrocytes (5). Favism may be more frequently associated with the Mediterranean variant. Glucose-6 phosphate dehydrogenase deficiency is mostly a paediatric disorder; however, in geriatric patients with a history of fava exposure presenting with non-immune haemolytic anaemia, it may be likely and should be included differential diagnosis.

Keywords: Geriatric, glucose-6 phosphate dehydrogenase, non-immune haemolysis.

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