

Glucose-6 Phosphate Dehydrogenase Deficiency in A Geriatric Patient

The Editor,

Sir,

An otherwise healthy 76 years old female patient presented to emergency department with acute fatigue, weakness and jaundice. She stated ingestion of roughly 1 kilograms 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 was not observed. Laboratory results revealed severe anemia along with indirect hyperbilirubinemia, reticulocytosis, high AST and LDH levels, hemoglobinuria and low haptoglobin. Peripheral blood smear revealed anisocytosis, poikilocytosis and Heinz bodies (Figure).

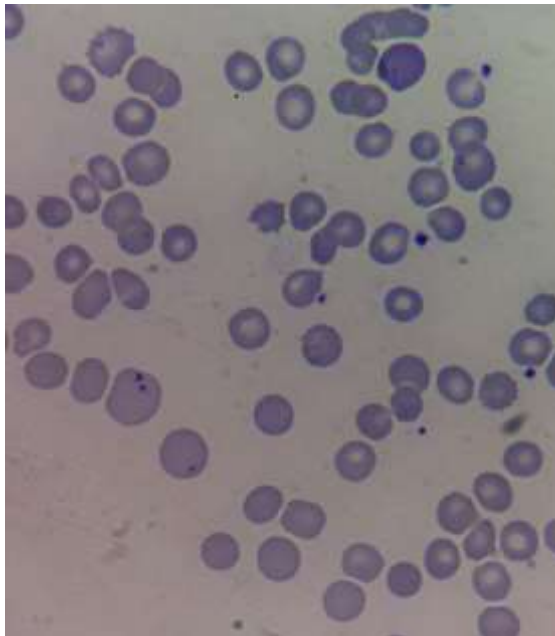


Figure: Peripheral blood smear showed anisocytosis, poikilocytosis and several Heinz bodies.

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

Glucose-6 phosphate dehydrogenase (G6PD) is vital for erythrocytes against oxidative stress. Its' deficiency is the most common erythrocyte enzyme defect. Deficiency can cause hemolysis 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.

Frequency of G6PD deficiency in Turkey varies between %1 to %5-20 in southwestern Anatolia (2). Most people with G6PD deficiency are not aware of their defect, they are asymptomatic until their first attack. Attack may be triggered due to infections, metabolic conditions, drugs or ingestion of fava beans (3). Favism is generally a pediatric disease, it 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).

G6PD deficient cells are lysed during acute hemolytic 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 Mediterranean variant. G6PD deficiency is mostly a pediatric disorder; however, in geriatric patients with a history of fava exposure presenting with non-immune hemolytic anemia, it may be likely and should be included differential diagnosis.

Keywords: Geriatric, glucose-6 phosphate dehydrogenase, non-immune hemolysis

T Ulas¹, G Tazegul², OK Yucel¹, R Erdem¹, U Iltar¹, O Salim¹, L Undar¹

From: ¹Division of Hematology, Department of Internal Medicine and ²Department of Internal Medicine, Akdeniz University Faculty of Medicine, Antalya, Turkey.

Correspondence: Dr G Tazegul, Department of Internal Medicine, Faculty of Medicine, Akdeniz University, Antalya, Turkey. E-mail: drgtazegul@gmail.com

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