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FAVISM IN AN ELDERLY FEMALE ASSOCIATED WITH LOW PULSE OXIMETRY SATURATION AND A HISTORY OF NORMAL PRIOR CONSUMPTION OF FAVA BEANS

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Background: G6PD deficiency is common in Mediterranean countries and is associated with favism, i.e., hemolytic anemia following consumption of fava beans. Given it is an x-linked recessive inherited disorder, it is uncommon in women.

Case Report: A 74-year-old female presented due to jaundice that developed in the past 24 hours. Her oxygen saturation on pulse oximetry was 86%, while her arterial blood gases showed a saturation of 94.7%. Lab tests revealed a hemolytic anemia (hemoglobin 9.4 mg/dl, 2.5% reticulocytes, LDH 582U/l, total bilirubin 8.4mg/dl, conjugated bilirubin 1.25mg/dl, normal coagulation times, normal platelet count and negative direct coombs). She denied taking any new medications. She reported consumption of fava beans the day before, although she reported uneventful prior consumption 2 years ago. Family history taking revealed that she had a son diagnosed with G6PD deficiency. G6PD deficiency was confirmed with quantitative testing (enzyme activity 6.7U/g Hb, normal range 7-16). During the first day the hematocrit fell to 21.8%, with 25% reticulocytes. She was managed with intravenous hydration and blood transfusion. The hematocrit rapidly rose, pulse oximetry saturation normalized, and she was discharged with a diagnosis of favism.

Discussion: Favism may occur in elderly women with heterozygous G6PD deficiency despite normal prior consumption of fava beans. This may happen due to skewed X-chromosome inactivation with aging, affecting the wild-type allele. The low oxygen saturation on pulse oximetry can be explained by favism associated methemoglobinemia, as previously described.

Recent Publications

1. Nkhoma E T, Poole C, Vannappagari V, Hall S A and Beutler E (2009) The global prevalence of glucose-6-phosphate dehydrogenase deficiency: a systematic review and meta-analysis. *Blood Cells, Molecules and Diseases* 42:267-78.
2. Au W Y, Lam V, Pang A, et al. (2006) Glucose-6-phosphate dehydrogenase deficiency in female octogenarians, nanogenarians, and centenarians. *J Gerontol A Biol Sci Med Sci.* 61:1086-9.
3. Hassan K S, Al-Riyami A Z, Al-Huneini M, Al-Farsi K and Al-Khabori M (2014) Methemoglobinemia in an elderly patient with glucose-6-phosphate dehydrogenase deficiency: a case report. *Oman Medical Journal* 29:135-7.
4. Schuurman M, van Waardenburg D, Da Costa J, Niemarkt H and Leroy P (2009) Severe hemolysis and methemoglobinemia following fava beans ingestion in glucose-6-phosphatase dehydrogenase deficiency: case report and literature review. *European Journal of Pediatrics* 168:779-82.

Biography

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