G6PD Deficiency unmasked by hyperglycemia

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Glucose-6-Phosphate Dehydrogenase (G6PD) deficiency is an X-linked disease responsible for moderate to severe hemolytic anemia. This is the most common erythrocyte enzyme disorder, often overpassed. A 14-year-old male patient was admitted to emergency department with hyperglycemia. He was treated initially with fluid therapy, after two hours with subcutaneous ultra-rapid insulin. After five days from hospitalization he showed scleral and skin jaundice. Were made diagnosis of hemolytic anemia by G6PD deficiency. There was no significant family or prior medical/ drug history. Interestingly, the hemolytic features were evidenced when blood glucose levels were returning to normal values. The insulin mediated NADPH loss may have resulted in an increased erythrocyte oxidant sensitivity and a loss of sulphydryl group availability, causing hemolysis to manifest.

G6PD deficiency is usually linked to drug which induced oxidative stress. Association with diabetes mellitus is unfrequently reported. This case wants to emphasize that the G6PD deficiency has been unmasked by hyperglycemia until now unknown without signs and symptom.

Biography
Francesco Costantino achieved his degree in Medicine in 1982 at Sapienza University in Rome. He specialized in pediatrics after few years. He is the director of pediatric diabetology department in Umberto I hospital in Rome. He also teaches in Pediatrics graduate school. He published a lot of papers in reputed journals and has been involved in numerous research projects. At the moment he is one of the most active pediatrician in field of insulin pump therapy and continuous monitoring glucose (CGM) in Italy.

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