جامعة المستقبل
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Case Study 3(G6PD)

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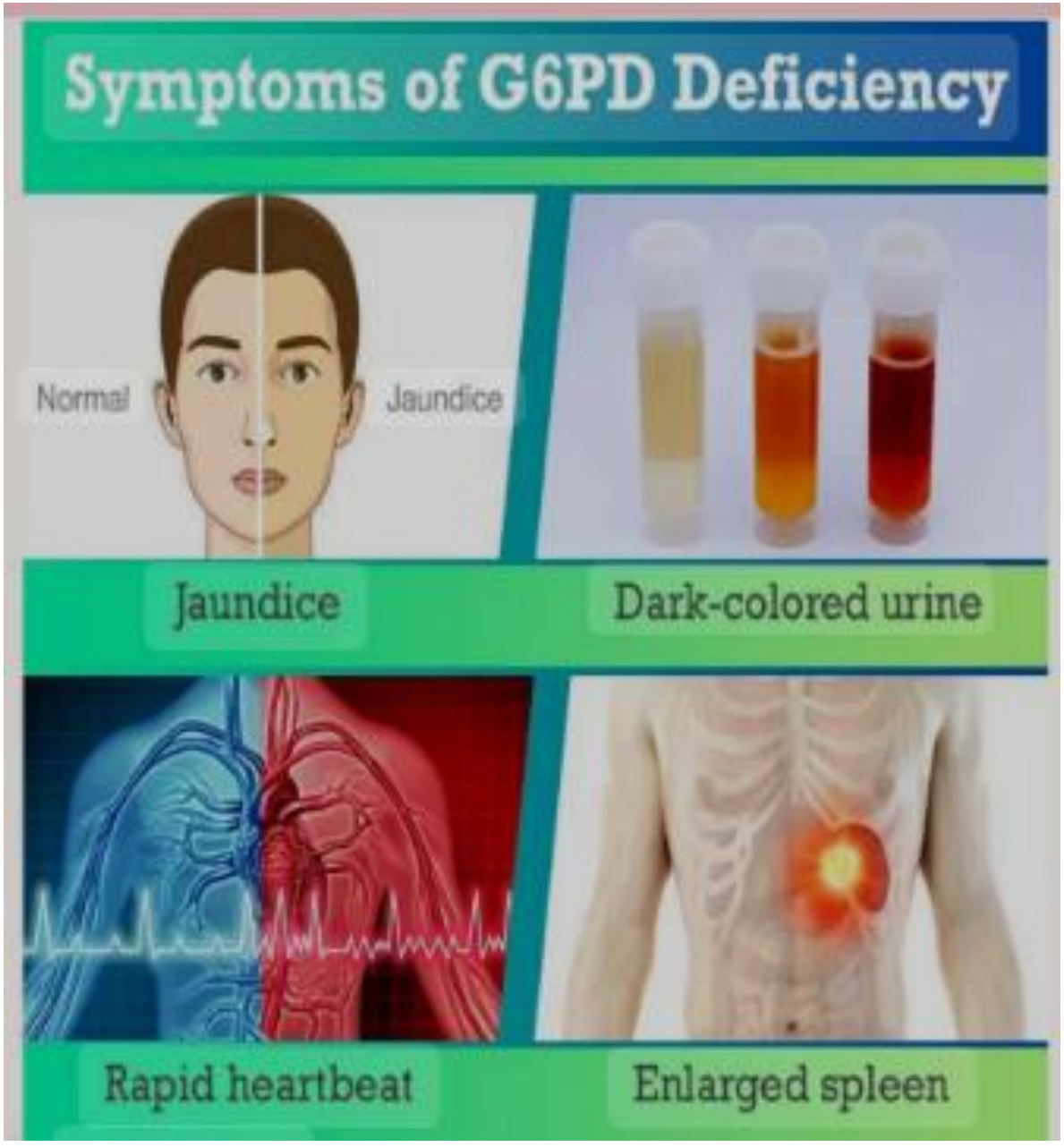
A 24-year-old male patient presented to the emergency department with complaints of fatigue, yellowish discoloration of the eyes, and dark-colored urine for two days. He reported that these symptoms appeared shortly after eating fava beans. On examination, he was pale and mildly jaundiced, with no splenomegaly. Laboratory investigations showed low hemoglobin (8.8 g/dL), elevated indirect bilirubin and LDH, increased reticulocyte count, and the presence of bite cells and Heinz bodies on peripheral smear. Glucose-6-phosphate dehydrogenase (G6PD) Deficiency enzyme activity was markedly decreased. The patient was diagnosed with acute hemolytic anemia due to G6PD deficiency triggered by ingestion of fava beans (favism). Treatment included intravenous fluids, folic acid supplementation, and counseling to avoid oxidant foods and drugs such as fava beans, sulfa drugs, and antimalarials. This case demonstrates how G6PD deficiency leads to increased red blood cell susceptibility to oxidative stress, resulting in hemolytic anemia.`


Symptoms of G6PD Deficiency
Normal
Jaundice
Jaundice
Dark-colored urine
Rapid heartbeat
Enlarged spleen

Sub-Group 1	Question
	1. What were the main symptoms experienced by the patient?
	2. What recent event triggered the patient's symptoms
	3. What physical signs were observed during examination?

Sub-Group 2	Question
	4. Which laboratory findings supported the diagnosis of hemolytic anemia?
	5. What was the patient's hemoglobin level?
	6. What was observed in the peripheral blood smear?

Sub-Group 3	Question
	7. What test confirmed the diagnosis of G6PD deficiency?
	8. What is the main function of the G6PD enzyme in red blood cells?
	9. How does G6PD deficiency lead to hemolysis?

Sub-Group 4	Question
	10. What are common triggers that can cause hemolysis in G6PD-deficient patients?
	11. Why was folic acid supplementation given to the patient?
	12. What types of medications should be avoided by patients with G6PD deficiency?

Sub-Group 5	Question
	13. How can patient education help prevent future hemolytic episodes?
	14. What is the genetic pattern of inheritance of G6PD deficiency?
	15. Why are males more commonly affected by G6PD deficiency than females?