CASE OF

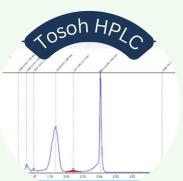


THE WEEK

Haemoglobinopathy Testing
Laboratory Science
Quick Interpretation Challenge

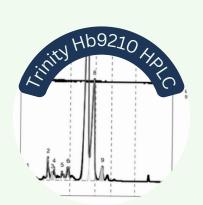
Let's figure it out together

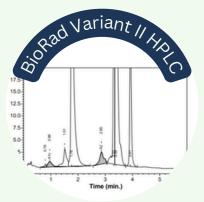








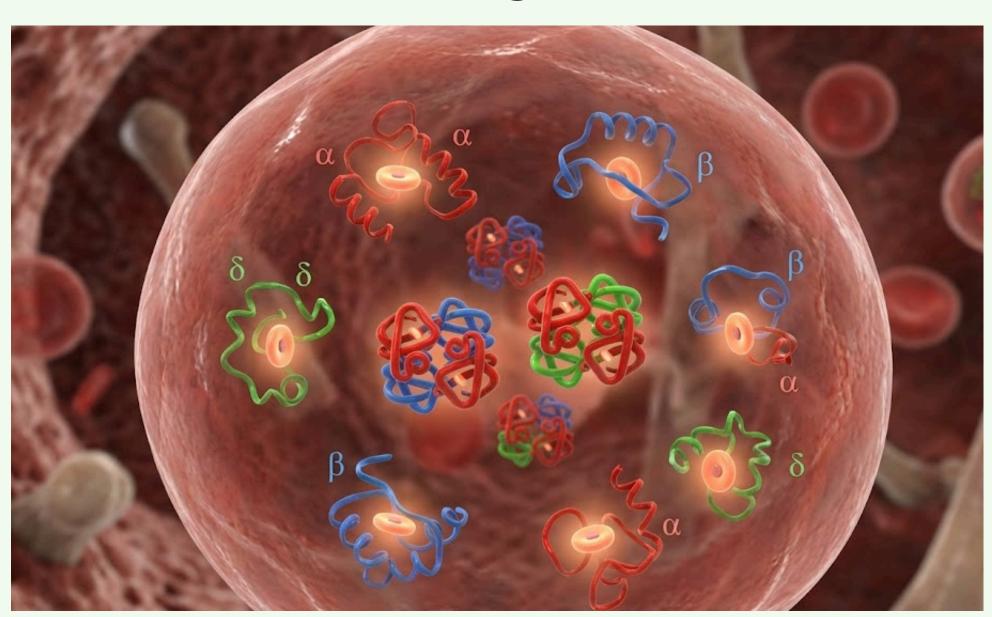








THEORY QUESTION





Why is HbA₂ elevated in beta thalassaemia carriers but normal or reduced in iron deficiency anaemia, despite both conditions presenting with microcytic, hypochromic red cells?





IRON DEFICIENCY INCREASES DELTA CHAIN PRODUCTION; BETA THALASSAEMIA DECREASES IT.

- BETA THALASSAEMIA CAUSES REDUCED BETA CHAIN SYNTHESIS, LEADING TO COMPENSATORY INCREASE IN ALPHA CHAIN PRODUCTION;
- CHAIN SYNTHESIS, LEADING TO COMPENSATORY INCREASE IN DELTA CHAIN PRODUCTION; IRON DEFICIENCY IMPAIRS ALL GLOBIN CHAIN SYNTHESIS EQUALLY.
- HBA₂ MEASUREMENT IS UNRELIABLE IN IRON DEFICIENCY DUE TO HAEMOLYSIS.

Comment your answers below

Educational use only | No diagnostic or clinical advice | Cases anonymised as per local policy





FOLLOW FOR WEEKLY CASE STUDIES AND DISCUSSIONS.



Educational use only | No diagnostic or clinical advice | Cases anonymised as per local policy

