e-Learn LAB — Immunology

Based on IQMH Centre for Proficiency Testing Survey IMGY-1709
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Focus of this Presentation

This is a series of three immunology patterns. You will be presented images and will be prompted with self-learning questions.
Images and case studies provided by the members of the IQMH Endocrinology and Immunology Scientific Committee, and the IQMH Consultant Technologist.
3 specimens

Question 1 - Think about a possible interpretation for specimens A, B, and C for this pattern before moving to the next slide.
Specimen A shows a pattern of an elevated beta region with decreased gamma globulins. Immunofixation is indicated to rule out the presence of a monoclonal protein.
Answer – Specimen B

• Specimen B has a faint abnormal band present in the beta-gamma region at the position of fibrinogen.
• Follow-up options may include thrombin treatment to remove fibrinogen or immunofixation to identify if the protein band was a monoclonal immunoglobulin.
• Since monoclonal proteins can migrate at the position of fibrinogen, laboratories should rule out the possibility the abnormal protein is a monoclonal immunoglobulin in some manner.
Specimen C is a patient with polyclonal hypergammaglobulinemia.

Laboratories that report protein fraction quantitation results to clinicians should consider commenting on the polyclonal nature of the elevated gamma when present.

Misinterpretation of polyclonal hypergammaglobulinemia as the presence of a monoclonal protein can be avoided by appropriate electrophoresis interpretation.
• The three cases presented here were developed to highlight how laboratories handle monoclonal proteins that migrate with other protein fractions (A), specimens that have monoclonal appearing proteins migrating at the position of fibrinogen (B) and specimens with other non-monoclonal patterns (C).
Tell us what you think

Send an email to:
Julie Coffey, Director of Education at jcoffey@iqmh.org to let her know what you thought of the learning material.

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