e-Learn LAB — Immunology

Based on IQMH Centre for Proficiency Testing Survey IMGY-1709
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This is an immunology case study. You will be presented with clinical information and 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.
Question 1 - Think about a possible interpretation for this UPEP pattern before moving to the next slide.
Question 1 - Answer

- Albumin with two abnormal proteins present in the gamma region.
- One large abnormal protein and one trace abnormal protein.
- Immunofixation follows to characterize the abnormal proteins.
Urine Immunofixation (UIFE)
Potential Isotypes

Potential isotypes for this case:

a) IgG  
b) IgA  
c) IgM  
d) Kappa  
e) Lambda  
f) Free kappa  
g) Free lambda
Think about a possible interpretation for this UIFE pattern.
• Urine Immunofixation (UIFE) Interpretation: Immunofixation reveals the presence of trace amounts of monoclonal IgG lambda and large amounts of monoclonal free lambda light chains.
Question 3

Think about any additional testing that would be suggested by the laboratory on this patient before moving to the next slide.

a) Free urine light chains analysis
b) Serum free light chains
c) Immunofixation for IgD
d) Immunofixation for IgE
Discussion

This specimen contained two monoclonal proteins, a low concentration protein and a high concentration protein, both migrating with the gamma globulins.
Discussion

When interpreting electrophoresis patterns, laboratories should consider reporting a description of the pattern when necessary (e.g., multiple bands) and include the presence of any potential monoclonal proteins along with some suggestion of the concentration when protein quantization is not performed.
• The corresponding immunofixation produced the presence of two monoclonal proteins that appear to be a high concentration monoclonal free lambda light chains and a low concentration monoclonal IgG lambda.

• Confirmation of the presence of monoclonal free light chains can be performed using free lambda light chains antisera.
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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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