Distortion of Capillary Serum Protein Electrophoresis Pattern May Indicate Monoclonal Gammopathy of Undetermined Significance but Not Multiple Myeloma

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Objectives: Serum protein electrophoresis (SPEP) is a screening test for detecting monoclonal proteins that are associated with diseases that include multiple myeloma, monoclonal gammopathy of undetermined significance (MGUS), Waldenström macroglobulinemia, and amyloidosis. Frequently, distortions of the distribution curves of the gamma, beta, and alpha-2 peaks are noted, necessitating immunofixation studies (IFE) to rule out a monoclonal gammopathy. In this study, we investigated the association between distortions of distribution curves in capillary SPEP and the final diagnosis.
Methods: Consecutive SPEP samples were evaluated, and immunofixation studies were recommended on specimens exhibiting distortions of the peak distribution curves.
Results: Of the 471 cases reviewed, we observed distortions in 101 cases (90 in the gamma region, 9 in the beta region, and 2 in the alpha-2 region). Reviewing electronic medical records, 18 (17.8%) of these 101 cases demonstrated monoclonal proteins by IFE and had a diagnosis of MGUS. Sixteen of the 101 cases had a history of malignancy, of which 6 were lymphoid malignancies. The majority of the remaining cases had histories of chronic heart failure or end-stage renal disease. Of the 42 cases with distinct peaks, 17 patients (40.5%) met the clinical criteria for diagnosis of multiple myeloma.
Conclusion: Clinicians order an SPEP, followed by IFE/UPEP if clinically indicated, to determine if a patient has a monoclonal gammopathy. Our study indicates that in only a small number of such patients (17 of 471 cases, or 3.6%), a diagnosis of multiple myeloma is established. In our experience, distortions in SPEs are more common (21.2%) than distinct peaks (8.9%). In addition, distortions are more often associated with clinical conditions such as MGUS, end-stage renal disease, or cardiovascular failure. In the current study, distortions of the distribution curves were not at all associated with a diagnosis of multiple myeloma.

A Rare Case of Immune Thrombocytopenic Purpura in a Patient With Hodgkin Lymphoma: A Diagnostic Dilemma

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Introduction: *Paraneoplastic syndrome* is a collective term for disorders arising from metabolic effects of cancer on tissues remote from the primary tumor. Such disorders maybe endocrine, hematologic, or neuromuscular disorders. Immune thrombocytopenia (ITP) is a rare PNS manifestation in Hodgkin lymphoma (HL). The prevalence of ITP associated with HL is unknown in Nigeria as there are few or no case reports. It is more common in males and is associated with autoimmune antibodies.
Case Presentation: We present a 49-year-old man who presented with swelling on the tongue with numerous hemorrhagic bullaes and ecchymosis. He had a small lymph node in the right axilla and another in the inguinal region. Lymph node biopsy came out as benign lymphoid hyperplasia. A diagnosis of ITP was made based on severe thrombocytopenia, megakaryocytic hyperplasia, and a negative viral serology. He responded well to steroid but was switched to Eltrombobag when he became refractory to steroids. A repeat biopsy was done 5 months after, due to increasing right axillary lymphadenopathy that revealed a nodular lymphocyte-predominate HL (NLPHL). He requested to travel to India for further care. In India, he had six cycles of ABVD with rituximab. PET/CT scan after the second cycle showed a partial treatment response and after the sixth cycle showed complete resolution of right axillary lymph nodes. Platelet count has been within normal range and patient is alive and well.
Conclusion: Hodgkin lymphoma can be associated with paraneoplastic hematologic syndromes, one of which is ITP. This could precede diagnosis of HL as in this case or present concomitantly. Sometimes it could be the only presenting feature of an underlying HL posing as a diagnostic dilemma. Therefore, a high index of suspicion is required to avoid diagnostic delay. Successful treatment of HL often reverses the hematologic paraneoplastic manifestations.

Pitfalls in Morphologic Identification by Digital Microscopy: Atypical Chronic Lymphocytic Leukemia

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Introduction: Literature suggests that large, morphologically atypical chronic lymphocytic leukemia (CLL) cells may correlate with more aggressive disease. We may think of atypical CLL as being FMC7 positive, but some cases have a typical immunophenotype and only the morphology is atypical. Automated digital microscopy imaging technology enables a faster and more objective classification of lymphocyte variants. However, this method is not without pitfalls.
Method: Medical records of 10 patients with a CLL diagnosis and atypical morphologic features, initially seen at Stony Brook Medical Center between August 2016 and December 2017, were reviewed. Lymphocyte morphology

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