Bone Marrow Metastasis from Colon Adenocarcinoma Mimicking Plasma cell Dyscrasia: A Diagnostic Challenge and Clinicopathological Correlation

Dr. Varshini Sindhiya Chanda
Dr. Bharat Potturu, Dr Suresh R - Yoda Lifeline Diagnostics, Ameerpet, Hyderabad, India

Dr. Bharat Potturu
Dr. Bharat Potturu, Dr Suresh R - Yoda Lifeline Diagnostics, Ameerpet, Hyderabad, India

Dr. Suresh R
Dr. Bharat Potturu, Dr Suresh R - Yoda Lifeline Diagnostics, Ameerpet, Hyderabad, India

Abstract:

Background: Bone marrow metastasis from colon adenocarcinoma is uncommon and may pose significant diagnostic challenges, particularly when the marrow morphology mimics plasma cell dyscrasia. Accurate clinicopathological correlation and immunohistochemistry are essential for establishing the diagnosis.

Case Presentation: A 71-year-old male with a history of hypertension and diabetes mellitus presented with dysphagia predominantly to solids, generalized weakness, abdominal pain, and intermittent vomiting. Initial hematological investigations revealed bicytopenia. Ultrasonography of the abdomen and pelvis was unremarkable. Upper gastrointestinal endoscopy demonstrated peptic ulcer disease with an oesophageal stricture. In view of persistent symptoms and unexplained bicytopenia, contrast-enhanced computed tomography of the abdomen was performed, which revealed circumferential thickening of the ascending colon. Bone marrow aspiration showed increased plasma cell-like cells and was initially interpreted as plasma cell dyscrasia. However, subsequent bone marrow biopsy revealed diffuse infiltration by atypical malignant cells arranged in glandular and cribriform patterns, raising suspicion of metastatic adenocarcinoma. Immunohistochemistry performed on the bone marrow biopsy showed diffuse positivity for CDX2 and CK20 with SATB2 negative, supporting a colonic origin.

Colonoscopy and PET CT which showed Segmental circumferential thickening of ascending colon correlated with CT scan findings and further biopsy from the same subsequently confirmed moderately differentiated (Grade 2) adenocarcinoma, establishing the diagnosis of colonic adenocarcinoma with bone marrow metastasis.

Conclusion: This case highlights the potential for metastatic colon adenocarcinoma involving the bone marrow to mimic plasma cell dyscrasia on aspiration smears. Careful histomorphological evaluation, clinicoradiological correlation, and judicious use of immunohistochemistry are crucial for avoiding diagnostic pitfalls and achieving an accurate diagnosis and timely treatment.

Keywords:

Colon Adenocarcinoma, Bone Marrow Metastasis, Plasma Cell Dyscrasia, Bicytopenia, Diagnostic Pitfall.