Adult Hematology Abstract Categories

Myeloma

PP 32

Secondary Primary Malignancy in Multiple Myeloma: Prostate Adenocarcinoma Following Long-term Lenalidomide Maintenance Therapy

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Introduction: Multiple myeloma patients have an increased risk of developing secondary primary malignancies, with reported incidence ranging from 3-20% depending on treatment regimens and follow-up duration. Lenalidomide maintenance therapy following autologous stem cell transplantation significantly improves progression-free survival but carries potential long-term risks including secondary malignancies. While hematologic secondary malignancies are well-documented, solid tumor development during lenalidomide maintenance is less frequently reported but increasingly recognized. Case Report: A 73-year-old male initially presented in 2016 with fatigue, bone pain, and normocytic anemia. Laboratory evaluation revealed IgG-kappa multiple myeloma with positive serum M-protein, elevated free light chain kappa/lambda ratio, and 40% plasma cell infiltration on bone marrow biopsy. Imaging demonstrated extensive osteolytic lesions without renal involvement. Family history was negative for malignancy, and the patient had no smoking history or significant comorbidities. Initial treatment consisted of bortezomib, lenalidomide, and dexamethasone (VRD) induction therapy from 2016-2017. Following excellent response, the patient underwent high-dose melphalan conditioning and autologous stem cell transplantation in 2017 without complications. Lenalidomide maintenance therapy (10 mg daily) was initiated in 2018, with regular hematology follow-up demonstrating sustained remission through 2023. During routine surveillance in 2024, elevated PSA (8.4 ng/mL) was detected, prompting urological evaluation. Prostate biopsy performed on August 20, 2024, revealed adenocarcinoma in two locations: right apex showing Gleason 6 (3+3), Grade Group 1 with 20% tumor involvement, and right basal region with Gleason 6 (3+3), Grade Group 1 with 5% tumor involvement. Remaining biopsy cores showed benign prostate tissue. Immunohistochemistry with high molecular weight keratin confirmed the diagnosis. Computed tomography on January 27, 2025, demonstrated prostatomegaly (64×51 mm), right renal pelvic dilatation ($\sim$3 cm) with 4 mm right ureteral stone, 4 mm left renal cyst, and multiple enlarged periaortic and peripancreatic lymph nodes, raising concern for advanced prostate cancer or possible myeloma progression. The patient continued to show no evidence of myeloma progression with maintained remission status throughout this period. However, the constellation of prostatic enlargement and lymphadenopathy suggested either advanced prostate cancer or concurrent disease processes requiring careful differentiation. Discussion: This case illustrates several important clinical considerations in long-term multiple myeloma survivorship. The development of prostate adenocarcinoma following 6 years of lenalidomide maintenance raises questions about treatment-related secondary malignancy risk. While lenalidomide-associated secondary malignancies typically manifest as hematologic disorders, solid tumors including prostate cancer have been reported with increasing recognition. The clinical challenge lies in distinguishing between prostate cancer progression and myeloma relapse, particularly given the lymphadenopathy observed on imaging. The patient's sustained myeloma remission suggests the lymph node enlargement may represent prostate cancer dissemination rather than plasma cell dyscrasia. The low-grade nature of the prostate adenocarcinoma (Gleason 6) typically indicates indolent disease, but the substantial prostatic enlargement and lymphadenopathy suggest more advanced local disease requiring comprehensive staging and multidisciplinary treatment planning. Conclusion: This case demonstrates the importance of comprehensive long-term surveillance for secondary primary malignancies in multiple myeloma patients receiving lenalidomide maintenance therapy. The development of solid tumors, particularly prostate cancer, warrants systematic screening and multidisciplinary management to optimize outcomes while maintaining myeloma disease control.

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PP 33

AL Amyloidosis Presenting with Cardiac Involvement in a 43-Year-Old Woman with Oligosecretory Multiple Myeloma

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Objective: Introduction: AL amyloidosis results from deposition of misfolded immunoglobulin light chains in various organs, with cardiac involvement occurring in approximately 60-70% of cases. Cardiac amyloidosis typically presents with heart failure symptoms and distinctive echocardiographic features including increased wall thickness, "sparkling" myocardium appearance, and restrictive physiology. While commonly associated with multiple myeloma, oligosecretory variants can pose diagnostic challenges due to minimal or absent monoclonal protein secretion in serum. **Case Report:** A 43-year-old female presented with progressive palpitations, dyspnea, fatigue, and peripheral edema. Initial evaluation by cardiology revealed significant cardiac abnormalities prompting comprehensive investigation. Echocardiography demonstrated characteristic findings highly suggestive of cardiac amyloidosis: concentric left ventricular hypertrophy with "sparkling" myocardium appearance, restrictive diastolic