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A Rare Complication of Multiple Myeloma Prior To Diagnosis

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ABSTRACT

Amyoidisis is a rare disorder characterised by the deposition of abnormal protein fibrills(amyloid) in various tissues and organs.In the context of multiple myeloma,a plasma cell dyscrasia ,amyloidosis can occur as a distinct complication,referred to as myeloma associated amyloidosis.This case report presents the clinical manifestations,diagnostic challenges and management strategies of a patient with amyloidosis associated with multiple myeloma highlighting the intricate relationship between these two.

INTRODUCTION

Amyloidosis is a rare disorder characterised by the extra cellular deposition of abnormal protein fibrills known as amyloid(AA ,AL) in various organs and tissues.It can present as primary or secondary condition with each subtype demonstrating distinct features and pathogensis.Here I present a case of cardiac amyloidosis in a patient with underlying multiple myeloma with no symptoms.

CASE PRESENTATION

A 55 year old woman presented with complaints of breathlessness and chest pain on exertion , lower limb swelling and weight gain , peripheral neuropathy.Upon evaluation the patient appeared pale with macroglossia and hepatomegaly with edema in lower extremities.

DIAGNOSTIC ASSESSMENT

Laboratory investigations revealed anemia,hypoalbuminemia with elevated liver enzymes and creatinine.Urinalysis demonstrated proteinuria.Echocardiogram shows biventricular wall thickening with normal cavity size and bi atrial enlargement .MRI Heart shows a diffuse decrease in T1 and T2 signal intensity of myocardium;native T1 is prolonged ; myocardial biopsy done & HPE shows congo red positive deposits.Inmunofixation electrophoresis revealed the presence of monoclonal immunoglobulin light chain(kappa).Based on the clinical presentation and laboratory findings the patient was diagnosed with myeloma associated amyloidosis.

MANAGEMENT AND OUTCOME

The patient received systemic chemotherapy consisting of a combination regimen with borrezomib,lenolidomide and dexamethasone to target the underlying plasma cell dyscrasia.Additionally supportive therapies were implemented to manage organ involvement and symptoms related to amyloid deposition.During the course of treatment,the patient experienced improvement in neuropathic symptoms and stabilisation of renal function.Follow up evaluations showed a reduction in serum

monoclonal protein levels and improvement in organ dysfunction.However,long term monitoring is necessary due to the potential for disease relapse and organ damage.

DISCUSSION

Myeloma associated amyloidosis is rare but severe complication of multiple myeloma,affecting various organs and leading to morbidity and mortality.The underlying pathogensis involves the production of abnormal monoclonal light chains by malignant plasma cells,which form amyloid fibrills in tissues.Clinical manifestations can include cardiac involvement,peripheral neuropathy,hepatomegaly and macroglossia.

Diagnosing multiple myeloma-associated amyloidosis requires a multidisciplinary approach ,including clinical suspicion,histopathological examination,and identification of the specific amyloid protein.Treatment aims to target the underlying plasma cell dyscrasia while considering the specific challenges posed by amyloidosis.Chemotherapeutic regimens used for multiple myeloma,such as proteasome inhibitors and immunomodulatory agents,have shown promising results in managing myeloma associated amyloidosis.

CONCLUSION

Myeloma associated amyloidosis represents a complex association between multiple myeloma and amyloidosis.Prompt recognition,accurate diagnosis,and appropriate management are crucial to improve patient outcomes.This case report emphasises the need for a comprehensive approach to optimize treatment strategies and minimise organ damage in patient with myeloma associated amyloidosis.

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