ASSOCIATION OF MULTIPLE MYELOMA WITH LIGHT CHAIN AMYLOIDOSIS - VISCERAL DAMAGES, TREATMENT AND IMPACT ON SURVIVAL: A SINGLE CENTER EXPERIENCE.

Sorina Badelita, Camelia Dobrea, Didona Vasilache, Monica Popescu, Daniel Coriu
Center of Hematology and Bone Marrow Transplantation,
Fundeni Clinical Institute, Bucharest

Amyloidosis light chain type (AL) is a disease through protein conformation disorder characterized by tissue accumulation of free light chains (or fragments thereof) that form amyloid fibrils. This disease can occur independent (primary amyloidosis) or in the context of another monoclonal gammopathies as multiple myeloma (MM), Waldenstrom's disease, non-Hodgkin's with secretion of monoclonal protein. In these conditions, the diagnosis will be of light chain amyloidosis associated with one of the diseases listed above.

This retrospective study shows the impact of association MM with AL regarding the clinical evolution with the type of visceral involvement, response to treatment and survival impact.

Material and Methods: 266 patients with MM admitted to our clinic between 2005 and 2014 were tested for AL; specific analysis for diagnosis and monitoring of multiple myeloma . Specific analysis of amyloidosis: Congo - Red examination in polarized light on samples from abdominal fat biopsy, renal biopsy, liver biopsy, rectal biopsy, lymph node biopsy, bone marrow biopsy; immunohistochemistry; electron microscopy; free light chain assay; proteinuria / 24 hours; EMG; Echocardiography; EKG; fibroscan; cholestasis tests;

Results and discussion: AL was identified in 44 patients (16.54%) from 266 patients with multiple myeloma. In this group of 44 patients with AL and MM: 66% had onset signs of of multiple myeloma related, but 34% patients had onset signs of amyloidosis (fatigue, weight loss, edema, peripheral neuropathy). 28 patients (63.63%) had at least 2 organ involved. 50% of patients had renal impairment manifested by chronic kidney disease and / or nephrotic syndrome. 16 (36.36%) patients had proteinuria; of these 14 (31.81%) nephrotic rank. Hepatic involvement was present in 11 patients (25%) being expressed clinically by hepatomegaly 7 (15.90%) patients; the remaining 4 patients experienced cholestasis, for these fibroscan examination was performed which revealed a liver infiltrated. 7 patients (15.9%) showed diastolic dysfunction delayed relaxation type; of these 6 patients had and restrictive cardiomyopathy. Regarding nervous system, 14 patients (31.81%) had clinically symptomatic peripheral neuropathy. Carpal tunnel syndrome was diagnosed in only 3 patients (6.81%). Autonomic neuropathy occurred in 34.18% of patients: 9 patients (20.45%) have experienced arterial hypotension, 5 patients (11.46%) disorders of bowel and 1 patient with urinary retention. Macroglossia was only found in 3 patients (6.81%).

Regarding the treatment of patients with MM and AL, it must be adjusted for each patient depending on the type of visceral lesion related by amyloidosis. Maximum attention should be given cortisone, bortezomib , and oral melphalan (not absorbed). Also very important is supportive therapy for organs injured by amyloid . Autologous bone marrow transplant is not contraindicated in patients with MM and AL, but it must be done more accurate assessment of heart function.

The impact on survival in association with amyloidosis, as a risk factor in patients with multiple myeloma, is dramatic. Mortality in these patients was 61.6% (22 patients died) and median survival period was reduced from 77 months in the control group (patients only with MM without AL), to 44 months in patients with MM and AL. Severity of the prognostic is based on the number of organs involved: in patients with more than 3 organ damage - median survival was reduced by 4 times, just 17 months compared with controls and mortality reached almost 70% of patients. For patients with MM and AL with cardiac involvement, survival dropped dramatically just 10 months, and 85% of them died.

Conclusions: The association of AL amyloidosis in patients with multiple myeloma is a real complication (16% of our patients with MM), much underdiagnosed in daily medical practice, with a major impact in the evolution and survival of multiple myeloma patients. The appropriate adaptations of treatment for each patient improves survival in these patients.

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