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AMYLOIDOSIS: CHANGING APPROACHES AND OUTCOMES

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Light-chain (AL) amyloidosis has been a harbinger of rapid death to afflicted patients for decades. Even through the 1980s, many hematologists and medical textbooks regarded the problem as "untreatable." Those predominantly middle-aged patients who presented with significant cardiac or renal involvement could expect a median survival of less than 1 year.

Multiple myeloma is an overtly malignant plasma-cell dyscrasia, a "cousin" to AL amyloidosis, and the outlook for myeloma patients has improved dramatically in recent years. Compared to myeloma patients, those with amyloidosis generally present at a younger age and with lower paraprotein levels, highlighting the fact that some abnormal proteins are prone to precipitate as amyloid deposits and cause symptoms from organ dysfunction before progressing to lytic bone disease and other complications typical of multiple myeloma. In multiple myeloma, novel therapeutic agents have extended life expectancy by more than double of that previously seen, to a median of more than 7 years. These new agents include the immunomodulatory drugs thalidomide and lenalidomide, and proteasome inhibitors such as bortezomib, with promising newer agents on the horizon. It is reasonable to expect that these newer agents could impact amyloidosis as much as or even more than myeloma given that amyloid presents with a lower clonal plasma cell burden.

Autologous stem cell transplants have etched an impactful niche in myeloma therapy, more so than in any other disease. Many now regard autologous transplant as the treatment of choice for AL amyloidosis. One exclusion from this therapy has been significant cardiac disease, as outcomes have been poor for such patients.

The Methodist Hospital stands at the forefront of changing the expectations for amyloidosis patients, offering aggressive treatments such as novel chemotherapy agents and autologous bone marrow transplants. The papers that follow review the state of the art of amyloidosis treatment, particularly the ramifications of cardiac involvement. They also present our unique experience with autologous stem cell transplants in patients after cardiac transplant — patients who would have been excluded from receiving this effective therapeutic approach because of frequent and severe complications associated with significant cardiac dysfunction. Our expertise in both hematology and organ transplantation makes us well-situated to provide optimal therapy for these patients. Sadly, we still see the occasional patient for whom we are limited in our ability to help — those who have delayed diagnosis or multi-organ involvement. We hope that increased recognition of the many different presentations of amyloidosis will lead to earlier diagnosis and more opportunities for successful interventions that result in improved quality of life and longevity for those affected.

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