Systemic AL amyloidosis: Current approach and future direction

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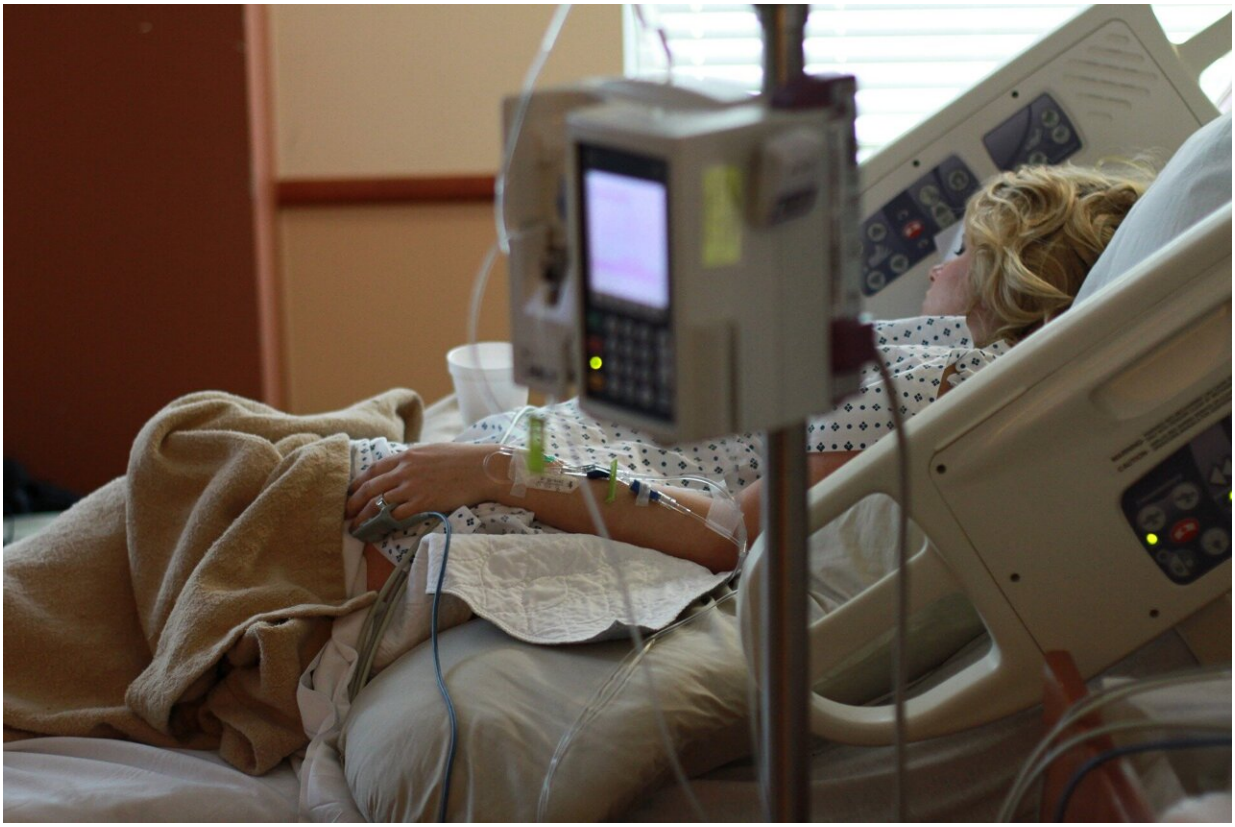

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A new review paper was published in *Oncotarget*, titled "Systemic AL amyloidosis: current approach and future direction."

In this review, researchers from SUNY Upstate Medical University, University of Texas MD Anderson Cancer Center, Monmouth Medical Center, University of Balamand, Cleveland Clinic Ohio, UnityPoint Methodist, Houston Methodist Cancer Center, and Cleveland Clinic Florida report the literature on the latest treatment updates of Systemic Light chain (AL) amyloidosis and the ongoing clinical trials highlighting the future treatments.

"In this manuscript, we discuss the general approach towards treating patients with amyloidosis and dive into the future perspectives in this multi-systemic disease," say the researchers.

Systemic AL amyloidosis is a monoclonal plasma cell proliferative disorder characterized by deposition of amyloidogenic monoclonal light chain fragments causing organ dysfunction. It is a fatal disease and if not diagnosed and treated early can lead to organ failure and potentially death. The renal system along with the cardiovascular system are the most common organs involved, but other organs such as the gut and liver can be involved as well.

The initial evaluation of patients requires confirming the diagnosis with tissue biopsy and staining with Congo red followed by confirmatory typing with mass spectrometry of the Congo red positive tissue. Then establishing the extent of the organs involvement by various staging and biomarkers testing. The treatment options and the tolerability of therapy depend on the disease staging, frailty and co-morbidities.

The autologous hematopoietic cell transplantation (HCT) after high dose melphalan therapy is an effective strategy which is usually done after initial bortezomib induction therapy. Unfortunately, most systemic AL amyloidosis patients are not candidates for HCT due to frailty, old age, multi-organ involvement, and renal or heart failure at the time of diagnosis. While it is widely accepted that the patients need to be treated

until they achieve complete hematologic response, the maintenance therapy after HCT is not well established in AL amyloidosis.

"The relationship between AL amyloidosis and MGUS is less clear, but some studies suggest that the risk of developing AL amyloidosis may be increased in patients with MGUS. It is important for patients with these conditions to undergo regular monitoring and evaluation for signs of AL amyloidosis, as early diagnosis and treatment can improve outcomes," conclude the researchers.

More information: Maroun Bou Zerdan et al, Systemic AL amyloidosis: current approach and future direction, *Oncotarget* (2023). DOI: 10.18632/oncotarget.28415

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