

Treatment with High Cut- off membranes in long hemodialysis sessions in patients with Multiple myeloma and acute kidney injury: our experience

Zhaklina Shterjova- Markovska¹, Irena Rambabova- Bushljetikj¹, Lada Trajceska¹, Igor Nikolov,¹ Galina Severova¹, Julijana Usprcov¹, Vlatko Karanfilovski¹, Aleksandra Canevska- Tanevska¹, Angela Kabova¹, Zoran Janevski¹, Vladimir Pushevski¹, Goce Spasovski¹

¹University clinic for Nephrology, University Ss Cyril and Methodius, Skopje, North Macedonia

BANTAO CongressThessaloniki 2023

Introduction:

Multiple myeloma(MM) is a malignant proliferation of plasma cells in the bone marrow, with a significant release of serum free light chains (FLC) which can cause acute kidney injury(AKI).

- The key to treating AKI is rapid FLC reduction using newer chemotherapeutic agents, such as bortezomib and
- extracorporeal removal of FLC by using a High cut off membrane(HCO) with
 - high permeability and molecular weight cut-off pore size (45- 60kD) for hemodialysis (HD),
 - allowing the filtration of both κ and λ FLC.

Results:

Mean reduction ratio(mRR) of FLC was:

53% | κ FLC of the first patient ,

66% | λ FLC of the second patient was 66%,

57% | λ FLC of the third patient was 57%,

61% | λ FLC of the fourth patient was 61%.

Three out of four patients recovered sufficient renal function to become independent of HD. Only the second patient did not recover the renal function, despite the reduction of FLC.

There were no major changes in albumin levels using an infusion protocol of 2x50-ml vials of 20% albumin at the end of the HD session.

Conclusion:

- The combined treatments of chemotherapy plus long HD sessions with HCO filters showed to be effective in reducing the levels of FLC and recovering sufficient renal function.
- This allows significant savings and better quality of life.

Thank you!