INFLUENCE OF CRRT ON ACUTE KIDNEY INJURY: A STRANGE CASE OF H1N1

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OBJECTIVE

Renal impairment in multiple myeloma in 10% of cases requires replacement dialysis treatment. We evaluated the effect of hemodialysis methods involving endogenous reinfusion (HFR Supra) on the removal of circulating light chains in a patient suffering from multiple myeloma and Acute kidney injury (AKI).

PRESENTATION

72-year-old male patient with multiple myeloma was hospitalized for H1N1 influenza pneumonia and AKI on pre-existing CKD.

METHOD

After three days from diagnosis, despite the antiviral therapy, there was a sudden clinical worsening with oligo-anuria,; therefore, it was necessary to start dialysis after the placement of a central venous catheter.
We continued with 23 intermittent hemodialysis treatments in HFR Supra mode for the removal of circulating light chains.
The patient continued the replacement hemodialysis treatment in HFR mode.

RESULT

Serum immunoglobulin light chain values were used as control markers of disease progression: Igκ, Igλ and ratio Igκ/Igλ (R κ/λ). At the time of the diagnosis of medullary plasmacytoma the following concentrations were found: Igκ was 15,2 g/L, Igλ was 0,3 g/L; R was κ/λ 50,67. After the 10 HFR Supra hemodialysis treatments, those values were decreased: Igκ 7,04 g/L, Igλ 0,22 g/L with a R κ/λ of 31,29.

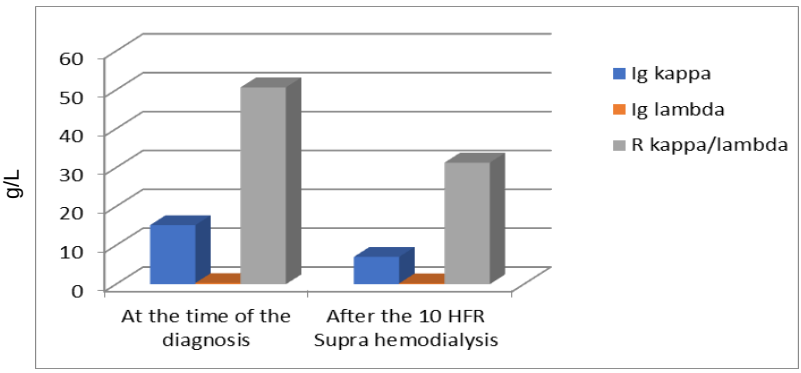

Figure 1. impact of the HFR supra on the serum concentration of the chains κ and λ

CONCLUSION

The therapeutic strategy is based on the attempt to reduce the blood concentration with HFR Supra. The decrease of Igκ and Igλ light chains detected after HFR Supra cycles was correlated with a stability of the patient's general clinical condition. Removing the circulating light chains in a patient with multiple myeloma would be useful not only in terms of slowing the progression of the disease and of the consequent organ damage associated with it, but also can be useful for increasing his/her survival.