CLINICAL UTILITY OF THE SERUM FREE LIGHT CHAINS (FLCS) KAPPA AND LAMBDA ASSAY IN THE FOLLOW-UP OF PATIENTS WITH MULTIPLE MYELOMA (MM) UNDERGOING AUTOLOGOUS PERIPHERAL BLOOD STEM CELLS TRANSPLANTATION (PBSCT)

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Abstract Body

FLCs assay is an important marker for diagnosing and monitoring transplanted patients with multiple myeloma (MM). It is a very sensitive test that allows the early detection of relapse especially when serum protein electrophoresis (SPE) fail to yield a response due to the absence or low level of the monoclonal component (CM).

In this study we described the FLCs levels and k/ ratio vs. CM in 7 patients with MM undergoing autologous stem cells transplantation (PBSCT). All parameters were analyzed during: onset of the disease, before and after transplantation with monitoring every 3 months in order to evaluate the k/ ratio as predictive marker of relapse.

One patient showed a very good partial response (VGPR) until 9 months post PBSCT. After this period the k value greatly increased even though the CM value remained unchanged, suggesting the disease progression as confirmed later by observation aspirate and biopsy procedures. In this clinical case the k/ ratio was an early marker of relapse.

In another clinical case we observed an extramidollary relapse as confirmed by Positron Emission Tomography (PET) and the only altered parameter was the k/ ratio increase. The analysis of clinical cases reported in this study has highlighted the extreme usefulness of monitoring serum concentrations of FLC for the disease progression. We can conclude that the ratio k/ could be considered an essential non-invasive early marker for multiple myeloma relapse in the follow-up of patients with MM undergoing PBSCT.