MALIGNANT TRANSFORMATION IN IgM MONOCLONAL GAMMOPATHY OF UNDETERMINED SIGNIFICANCE (MGUS)

S. Montoto, J. Bladé, M. Rozman*, L. Rosiñol, B. Nadal, E. Giné, M. Aymerich*, J. Esteve, E. Montserrat. Institute of Hematology and Oncology, Department of Hematology and Hematopathology Unit*, *IDIBAPS*, Hospital Clínic, Barcelona, Spain.

Background: MGUS is a frequent disorder characterized by the presence of a small serum M-protein in individuals with no evidence of multiple myeloma (MM), Waldenström's macroglobulinemia (WM) or primary amyloidosis (AL). Although one fourth of these individuals will evolve into a malignant disease, there are not well-established predictors of outcome, particularly in the IgM type.

Aim: To identify predictor features of malignant transformation in a series of patients from a single institution with IgM MGUS and prolonged follow-up.

Patients and Methods: Among 434 patients diagnosed with MGUS (IgG: 292, IgA: 82, IgM: 52, others: 8) from 1970 to 2001 and with a minimum follow-up of one year, the 52 (27 M/25 F; median age: 67 yrs) of IgM type were analyzed. All patients had an M-protein size <30 g/L. Bone marrow aspirates were reviewed independently by two of the authors and the proportion of bone marrow plasma cells (BMPC) were estimated from a 500 cell-count. The median follow-up was 5 years (range: 1-20.4 years).

Results: The light chain was of kappa type in 71 % of the patients. The median M-protein size was 14.5 g/L (<10 g/L in 9.6 %, 10-20 g/L in 67 %, and >20 g/L in 23 %). The median percentage of BMPC in 39 reviewed samples was 2.6 % (range: 0.6-6.7). After a median follow-up of 5 years, 6 patients (11.5 %) have evolved into a malignant condition (5 WM and 1 NHL). The median time to progression to WM was 3.6 yrs (range: 2.3-12.4). The risk of transformation was 13.3 % (95% CI: 0-27) and 27.7 % (95% CI: 0.3-55.1) at 10 and 20 years, respectively. The only variable associated with a higher risk of transformation was the percentage of BMPC (<5 % *vs.* ≥ 5 %, p=0.014). No significant differences in the risk of transformation were found between our IgM MGUS population and the remaining MGUS types.

Conclusions: In IgM MGUS the rate of transformation to WM was similar to the risk of malignant evolution of other MGUS types, being the percentage of bone marrow plasma cells (i.e., ≥ 5 %) the only variable with prognostic value for malignant transformation.