



Monoclonal Gammopathy in Young Algerian Cohort: Are the Characteristics ;



Sex Ratio, Immunoglobulin Isotype and Prognosis Similar to the Conventional Ones?

Dr Bouchra Berkani, Dr Fatma Merah, Pr Reda Djidjik

Medical Immunology Laboratory of Hospital University Center; Beni Messous; Algeria

INTRODUCTION

Monoclonal gammopathies are conditions in which abnormal proteins (antibodies) are found in the blood.

The most common condition linked with these abnormal proteins is monoclonal gammopathy of undetermined significance (MGUS). It's rare in young patients (< 40 years at diagnosis).

We hypothesized that MGUS detected in young patients may have different features.

OBJECTIVE

The aim of this study was to highlight MGUS in young patients evaluated during the last 02 years in Beni Messous laboratory.

METHODOLOGY

A retrospective study that included a cohort of young Algerian patients (<40 years) with monoclonal gammopathy evaluated between January 1, 2023 and November 4, 2024.

The serum and/or urine protein electrophoresis, and immunofixation or immunosubstraction assays were performed by Hydrasys (Sebia) and Capillarys (Sebia).

RESULTS

The present study included 33 patients, 12 (36.3 %) which are men and 21 (63.6 %) are women with sex ratio 0.57.

The median age was 30 years with extremes ranging from 13 to 39 years.

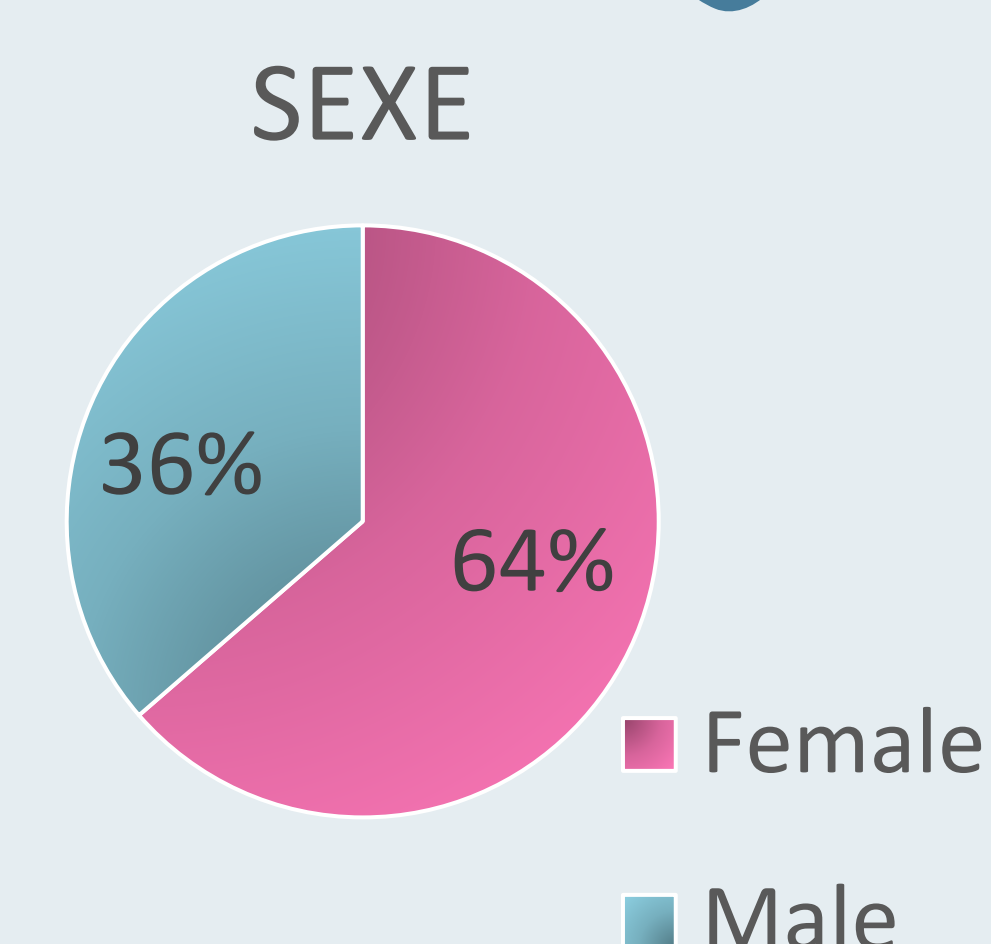
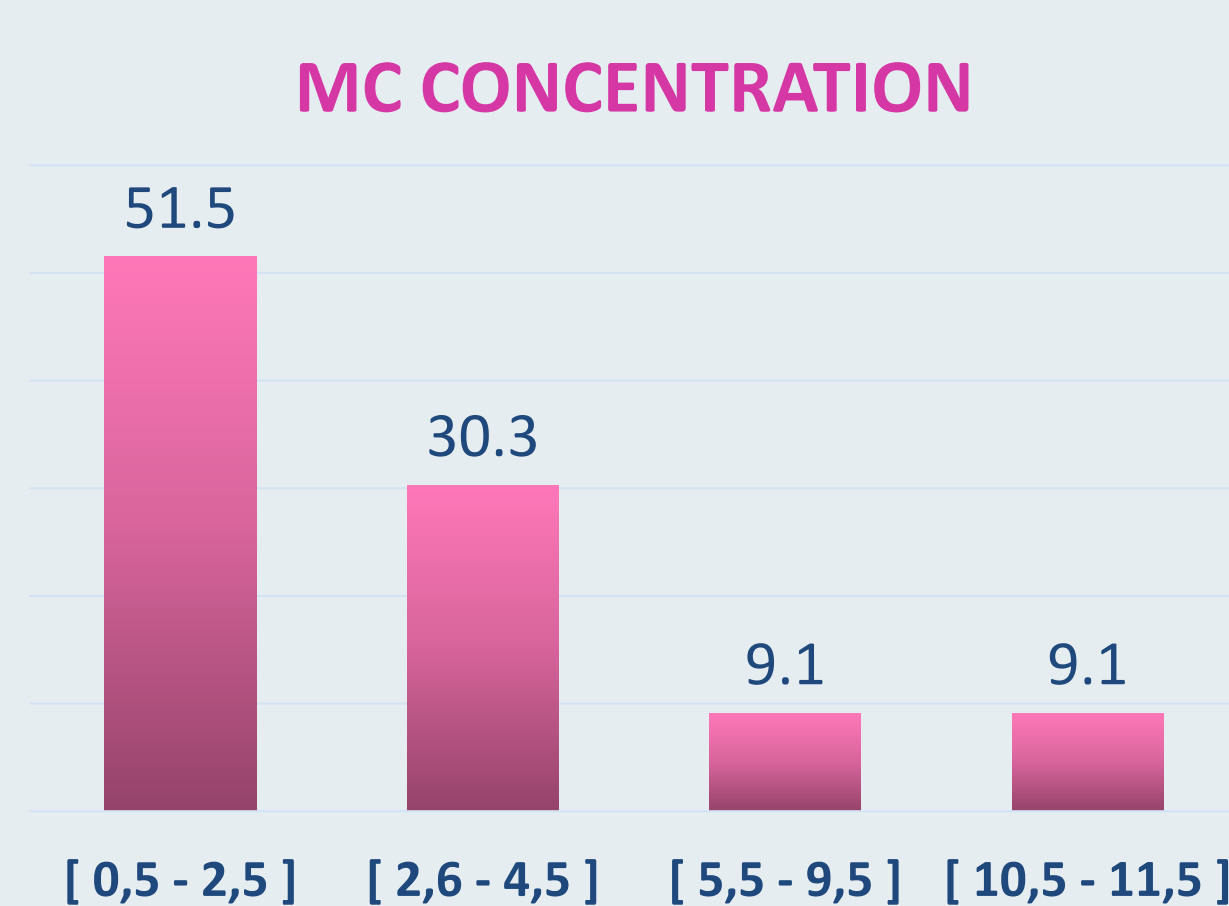
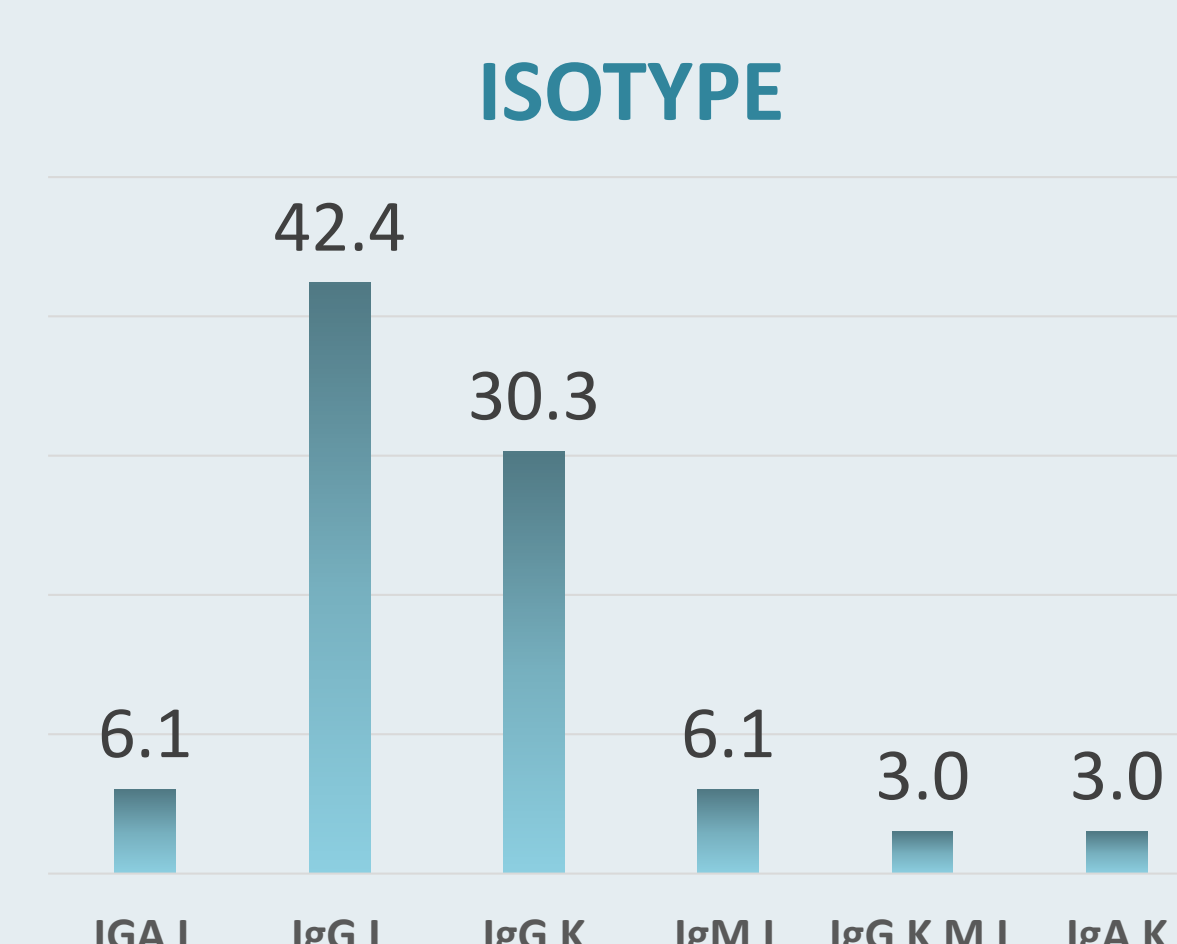
The size of M protein was relatively big in our study cohort compared to those in previous studies[1].

The mean concentration of M component was 3.44(+/- 2.81) g/l.

ANALYSIS

The female percentage observed in our study was clearly higher than male with sex ratio 0.57. This result contradicted literature data.[2]

The risk of progression to plasma cell disorder in young patients was predicted by the size of M protein and the isotype of immunoglobulins.



CONCLUSION

Our study of MGUS profile observed in young patients shows special features. The female percentage was found to be higher than male and the non IgG isotype (which is a poor prognosis factor) considerably exists in our cohort.

It is uncommon to acquire MGUS in young age but it has become more and more common in recent years.

References

[1] Prognosis of young patients with monoclonal gammopathy of undetermined significance (MGUS)

Li Pang, S. Vincent Rajkumar, Prashant Kapoor, Francis Buadi, Angela Dispenzieri, Morie Gertz, Martha Lacy, Robert Kyle, Shaji Kumar

[2] Epidemiological and immunochemical parameters of monoclonal plasma cell dyscrasias of 2121 cases in Algeria R. Belounia, I. Allama, K. Cherguelainea, L. Berkania, B. Belaida, Y. Berkoukb, S. Nekkalb, M. Saidanic, M. Belhanib, M. Ghafford, R. Djidjika