IgA Type Multiple Myeloma, Clinical Features, and Prognosis

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To the Editor: In the past 10 years, remarkable progress has been made in the treatment of multiple myeloma (MM). In clinical practice, we used Durie-Salmon Staging System (DSS), International Staging System (ISS), and revised ISS to judge the prognosis of myeloma patients. MM is divided into eight types, the type of IgA is considered to be poor prognosis, but so far there is no evidence basis of literature. We analyzed the clinical features and living conditions of IgA type MM patients in the real world.

The study was conducted with the approval of the Ethics Committee of Beijing Chao-Yang Hospital, Capital Medical University, and all aspects of the study complied with the *Declaration of Helsinki*. The Ethics Committee of Beijing Chao-Yang Hospital specifically approved that no informed consent was required because the data were analyzed anonymously with routine monitoring and because the patient records/information were anonymized.

One hundred and twenty-nine IgA type MM patients from Qingdao Central Hospital, First Hospital of Jilin University, Beijing Chao-Yang Hospital (West) were enrolled into the study from June 2011 to December 2015. The diagnostic criteria were according to MM diagnostic criteria.[1] These patients were staged according to ISS and DSS. The criterion of therapeutic efficiency was according to the International Myeloma Working Group.[1] Extramedullary plasmacytomas (EMPs) were confirmed by magnetic resonance imaging, computed tomography, or histopathological analysis. The median follow-up time was 25 months (range: 3–38 months). The following procedures were routinely performed before and after chemotherapy: physical examination, measurement of serum creatinine, C-reactive protein, serum lactate dehydrogenase, beta-2 macroglobulin, albumin levels, bone marrow aspirates and biopsy, and urinary globulin electrophoresis and immunofixation. All the 129 patients received chemotherapy. Eighty-nine (69.0%) patients received bortezomib-containing regimens such as bortezomib plus cyclophosphamide and dexamethasone, bortezomib plus dexamethasone, and bortezomib plus doxorubicin and dexamethasone. Forty patients treated with the conventional regimens. In accordance with the International Myeloma Working Group 2016, the treatment responses were classified as complete remission (CR), very good partial response (VGPR), partial remission (PR), stable disease, and progressive disease. We also assessed the patients for adverse events, which were graded according to the National Cancer Institute Common Terminology Criteria for Adverse Events version 3.0.

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We used SPSS version 18.0 software (SPSS Inc., Chicago, IL, USA) for the statistical analysis. We used the Kaplan–Meier method to estimate survival.[2] $P \leq 0.05$ was considered statistically significant.

In our study, the monoclonal protein type IgG and IgA were more common, and the proportion was 47.2% and 21.4%. In total, 129 cases of IgA type MM were analyzed in this study. There were 75 men and 54 women. The median age was 62.9 years (range: 40.0–79.0 years). The most common initial symptoms included bone pain (63.2%), blood hyperviscosity (32.3%), and EMPs (31.7%). Of these 129 patients, 61 patients have performed the detection of cytogenetics with interphase fluorescence *in situ* hybridization: 28 patients (45.9%) with the chromosome 1q21 gain, 15 patients (27.8%) with the (17p) deletion, and 6 patients (9.8%) with (4;14) translocation. The positive rate for two or more genes' abnormal was 19.6% in 12 cases. In the IgA type MM patient, the rate of EMPs was 31.7%, in which had 9 cases with pleural effusion.

The overall survival rate (ORR) of the patients who had received bortezomib-containing regimens was 95.5% (85/89) and the without bortezomib-containing group was 55.0% (22/40). The median time of progression-free survival (PFS) was 22 months and 10 months, respectively, and the 3 years of overall survival was 42.0% and 36.0% [Figure 1]. In general, the patients in this study tolerated bortezomib combination therapy well. The most common severe toxicities associated with bortezomib were thrombocytopenia and peripheral neuropathy. Infection was the most common adverse effect among the patients who received conventional regimens.

In our study, the clinical manifestation of the 129 IgA type MM patients suggested that bone destruction, EMPs, and pleural effusion were the most common features. The 31.9% new diagnostic patients had extramedullary disease, higher than the percentage reported in a previous study.[3] In our study, 15 patients had the (17p) deletion and 28 patients have chromosome 1q21 gain abnormalities. It has been

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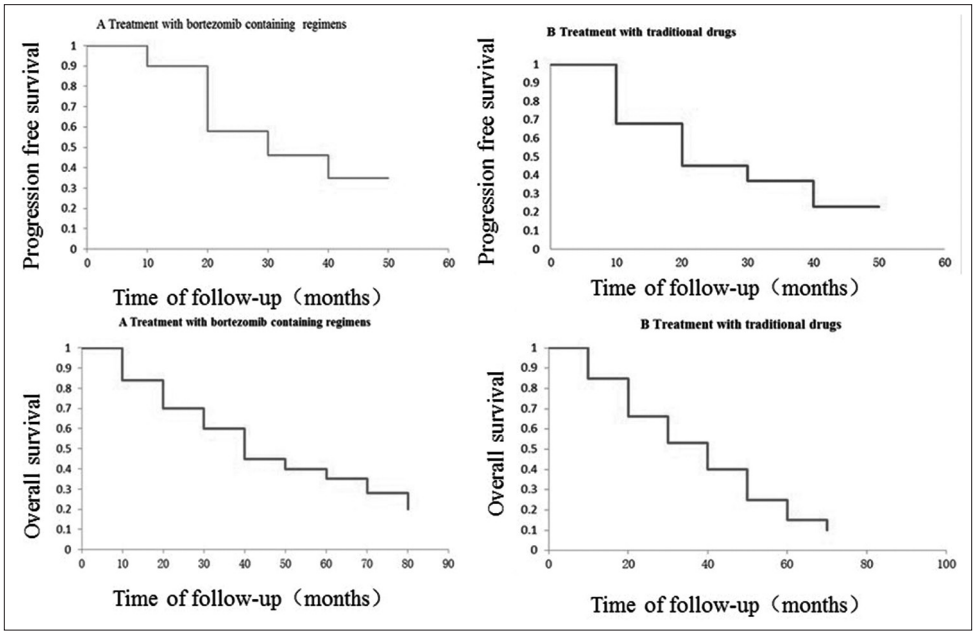

Figure 1: The progression-free survival and the overall survival of the IgA type multiple myeloma patients.

shown that MM prognosis depends on the underlying cytogenetic subtype. Deletion of 17p13 is detected in only 10% of newly diagnosed MM cases.[4] The unfavorable cytogenetic prognosis in our data was higher than the others were reported in the literature.[5]

Overall, we found that the ORR of patients treated with bortezomib combination regimens was 95.5% (85/89) including 52.8% (47/89) CR, 16.8% (15/89) VGPR, and 23.6% (27/89) PR. This is significantly higher than the ORR of 55.0% (22/40) in the patients without bortezomib treatment. The median time of PFS was 22 months and 10 months, respectively, and the 3 years of overall survival was 42% and 36%.

In our study, the IgA type MM had more high-risk cytogenetic abnormalities and extramedullary disease. This might explain why IgA type has a poor prognosis. The use of bortezomib strongly suggested the beneficial effect on the response and prognosis for patients with IgA type MM.

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Conflicts of interest

There are no conflicts of interest.

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