EUROPEAN HEMATOLOGY ASSOCIATION

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ABSTRACT BOOK

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including subgroup Ia (11,80±2,32). Mean plasma fibrinogen (FBG) concentration was 3,65±1,85 g/L and did not significantly differ in MM and nHL patients with and without thrombosis (4,06±1,90 *vs* 3,24±0,1,80 g/L, p=0,309). But FBG level in subgroup Ia was found to be significantly higher than that in the remaining patients (5,07±2,45 *vs* 3,23±1,48, p=0,047). Mean D-dimer level was 2,59±4,70mg/L, and there was not significantly different in patients with and without thrombosis (4,01±6,40 *vs* 1,16±0,97 mg/L, p=0,159), however D-dimer was elevated in subgroup Ia in comparison with that in group II (2,52±1,29 *vs* 1,16±0,97 mg/L, p=0,034).
Summary/Conclusions: Venous thrombosis was confirmed in 11 of 22 patients with newly diagnosed patients with MM and n-HL. In patients with many thrombotic lesions there was a trend for elevated activity of endothelial cells (EMPs), but not platelets (PMPs).

PB1964

GALECTIN-3 AS A PREDICTOR OF STATIN TREATMENT EFFICACY IN PATIENTS WITH MULTIPLE MYELOMA

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Background: Galectins are a family of lectin molecules that have emerged as key players in inflammation and tumor progression by displaying intracellular and extracellular activities. Increased expression of galectin-3 (Gal-3) has been associated with chronic myeloid leukemia, multiple myeloma, and chronic lymphocytic leukemia. Although modern treatment options for multiple myeloma produce high response rates, the interrelation between elevated Gal-3 and survival rate is not fully understood. Moreover, elevated Gal-3 associates with increased cardiovascular risk. In this context there is possibility to use statins in multiple myeloma patients to prevent unfavorable outcomes under control of Gal-3 level.
Aims: The aim of the study was to investigate an interrelationship between pre-treatment Gal-3 level and one-year survival rate in subjects with multiple myeloma.
Methods: One hundred twelve subjects with multiple myeloma who reached at least partial remission were enrolled in the study. All subjects gave their written informed consent to participation in the study. Patients were divided into 2 groups based on whether or not statins were included in their treatment: a statin group (n=51) and a no statin group (n=61). Among patients in the statin group, 31 patients received 20- mg/day atorvastatin and 20 patients received 40-mg/day atorvastatin. None of the patients had received any lipid-modulating medications, including statins or fibrates, before enrollment. Observation period was up to 1 year. Blood samples for biomarkers measurements were collected. ELISA method for measurements of circulating level of Gal-3, and NT-pro-brain natriuretic peptide (NT-pro-BNP) were used. Concentrations of Gal-3 and NT-pro-BNP for cumulative survival rate were tested.
Results: Within 1 year progressions were reported in 23 patients (8 statin users (15.7%) and 15 never statin users (24.6%) (P<0.05)). 92 cardiovascular events were reported in 36 patients, (12 statin users (23.5%) and in 24 never statin users (39.3%) (P<0.01)). Lipid lowering effect in statin users was associates with declined serum Gal-3 level, whereas in not statin users similar response was not appeared. No any changes in hemodynamics and other biomarkers between both cohorts were found. Univariate logistic regression had exhibited that Gal-3 (odds ratio [OR]=1.13; 95% CI=1.07–1.25; P=0.003), NT-proBNP (OR=1.05; 95% CI=1.03–1.08; P=0.001), and statin therapy (OR=1.06; 95% CI=1.01– 1.10; P=0.001) predicted one-year cumulative cardiovascular events. Gal-3 (odds ratio [OR]=1.09; 95% CI=1.05–1.19; P=0.02), and statin therapy (OR=1.05; 95% CI=1.01– 1.9; P=0.04) predicted one-year progression free survival. After adjustment on statin therapy, Gal-3 remained independent predictor one-year cumulative cardiovascular events (OR=1.07; 95% CI=1.05–1.10; p=0.001). When initial serum Gal-3 level has incorporated into prediction model, statin therapy was found as predictor for improving survival in patients with elevated serum Gal-3 level (>14 ng/ml).
Summary/Conclusions: Elevated pre-treatment galectin-3 level was found a powerful predictor of positive effects of statins in patients with multiple myeloma.

PB1965

CLINICAL SIGNIFICANCE OF OSTEOBLAST PRECURSORS AND OSTEOCLAST PRECURSORS IN EARLIER DIAGNOSIS AND MONITORING OF MYELOMA BONE DISEASE

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Background: Multiple myeloma (MM) is a kind of plasma malignant tumor. Myeloma bone disease (MBD) is a most common complication of MM, with up to 80% of them developing osteolytic lesions.The primary diagnostic procedure for the detection of bone involvement in MM is conventional radiography. Limited sensitivity was an important disadvantage of conventional X-ray in MBD.
Aims: To find more sensitive markers to diagnose bone disease earlier and evaluate the effect of therapy.
Methods: we detected circulating osteoclast precursors (OCPs) and osteoblast precursors (OBPs) by flow cytometry, comparing with special biochemical markers, such as tartrate-resistant acid phosphatase isoform 5b (TRACP-5b), carboxy-terminal cross-linking telopeptide of type I collagen (CTX), osteocalcin (OCN) and procollagen I amino-terminal propeptide (PINP).
Results: The results showed that circulating OBPs in the newly diagnosed MM patients significantly decreased compared with the normal controls (7.14% *vs* 12.82%, *P*=0.045). While circulating OCPs in the newly diagnosed patients and remission patients were significantly increased than the normal controls (2.46% *vs* 0.17%, *P*=0.000; 1.87% *vs* 0.17%, *P*=0.000, respectively). According to X-ray, newly diagnosed patients were divided into stage A and B (without and with osteolytic lesions). Compared with the normal controls, circulating OBPs in stage A and B reduced (12.82% *vs* 7.47%, *P*=0.041; 12.82% *vs* 7.14%, *P*=0.010, respectively), while circulating OCPs elevated (0.17% *vs* 2.71%, *P*=0.001; 0.17% *vs* 2.37%, *P*=0.010, respectively). The levels of TRACP-5b and CTX in the newly diagnosed patients were higher than the normal controls (*P*=0.014, *P*=0.037) and remission patients (*P*=0.025, *P*=0.003), and they were significantly higher in stage B than the normal controls (*P*=0.015, *P*=0.002). However, PINP and OCN levels had no significantly changes in different stages.

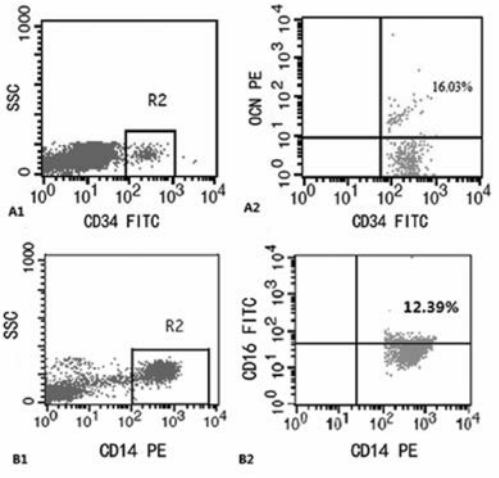

Figure 1.

Summary/Conclusions: In conclusion, abnormal circulating OBPs and OCPs were found earlier before X-ray in MM and still existed in remission patients, indicating that they maybe novel predictive markers for early diagnosing and monitoring bone disease.

PB1966

BORTEZOMIB IN COMBINATION WITH HIGH DOSE MELPHALAN AS CONDITIONING REGIMEN IS SAFE AND IMPROVES THE RESPONSE RATES IN PATIENTS WITH NEWLY DIAGNOSED MULTIPLE MYELOMA

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Background: High dose therapy followed by autologous stem cell transplantation (ASCT) is the standard of care as first-line treatment in eligible patients with newly diagnosed Multiple Myeloma (MM). High-dose Melphalan (HDM) is the standard conditioning regimen before ASCT. Recent evidence suggests that the depth of response after the induction therapy influences the progression free survival (PFS) and, in most studies, the overall survival (OS). To improve the depth of response after ASCT in transplant–eligible MM patients the introduction of Bortezomib (BOR) to high-dose Melphalan (HDM) in conditioning regimen has shown to be effective without increased hematological toxicity.
Aims: Aim of the study is to evaluate safety and response rates in patients treated with BOR+HDM as conditioning regimen before ASCT.
Methods: In this study we retrospectively analyzed, in a single center, 27 patients treated with BOR-HDM as conditioning regimen as compared to a historical cohort of 21 patients treated with HDM alone in order to evaluate the safety and the response rate of the combination treatment. All patients in both groups were treated with novel agents as part of induction therapy. The conditioning regimen consisted in HDM (100-200 mg/m2, depending on age and comorbidity) administered on day -2, and only for patients in the BOR-HDM group, a single-dose Bortezomib at the dosage of 1.3 mg/m2 on day -1. Stem cells were reinfused on day 0.
Results: Any significant difference was not observed between the two cohorts of MM patients analyzed regarding the median age at diagnosis (61 *vs* 59 years) and the dose of Melphalan. Distribution of ISS stage was similar in the