CD56+, IHC of CD138+ plasma cells, presence of M-protein in bone marrow) (Fisher p ranged from 0.292 to 0.73). An aberrant phenotype or the presence of clonal plasma cells <10% in SP patients was detected in 31%. According to the secretion of immunoglobulins: with MGUS, IgG secretion (53.3%) was most common, with SP, we observed non-secretion variant (37.5%), IgG secretion (31.5%). During the observation period, disease progression into MM was recorded in 18.8% in SP and in 16% MGUS patients. Disease progression in SP patients was associated with the presence of cytogenetic changes (the presence of del13) in combination with IHC of CD138+ >10%, an abnormal ratio of κ/λ chains. High expression of CD27+ was observed. In one patient with SP (iliac plasmacytoma), the disease transformed into MM within six months in the presence of risk factors: clonal plasma cells in the bone marrow −3.1%, CD56+ 93.1%, CD95+ 3.8% by IPT, del13, IHC CD138+ 20%. With MGUS, disease progression was associated with the presence of a combination of CD138+ >10% (76.5% vs. 23.6%; $p < 0.0001$), CD95+ <20% (44.0% vs. 71.4%; $p < 0,083$), CD56+ >20% according to IPT (27.3% vs. 78.0%; $p < 0.0001$), loss of CD27+ expression (66.7%), abnormal ratio κ/λ of chains $p < 0.001$.

Conclusion: Our study showed that a combination of such indicators as the presence of cytogenetic changes (in particular, the presence of del13), CD138+ cells >10% according to IHC, CD56+ >20%, CD95+ <20% according to IPT in combination with an abnormal ratio of κ/λ chains can have prognostic value in transformation into MM in both MGUS patients and SP patients.

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Poems syndrome: a "multifaceted" entity of plasma cell disorder

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Objective: The objective of this study is to reveal patients with misdiagnosed POEMS syndrome in the group of patients with polyneuropathy and to stratify the right form of the plasma cell disease. POEMS syndrome (polyneuropathy, organomegaly, endocrinopathy, M-protein, skin changes) is a rare paraneoplastic disorder caused by plasma cell proliferative disease. The exact incidence of POEMS syndrome is unknown as diagnosis of POEMS syndrome is prolonged and complicated due to variety and non-specific symptoms. In accordance to some sources the incidence of POEMS syndrome is 0.3 per 100,000, however the disease rate may be higher due to missed diagnosis. POEMS syndrome is a plasma cell disorder and the medications used for the treatment are similar to multiple myeloma treatment regimens. However this is a distinct entity with disease process nuances, that's why the selection of the right medication could be crucial for the wellness and survival of patient with POEMS syndrome.

Case report: The first case of POEMS syndrome is diagnosed in Armenia in 2019. The rate of plasma cell disorders that is mainly presented with multiple myeloma is 1.3 per 100,000 in Armenia. In the last decade there is a tendency of increasing of multiple myeloma cases in Armenia. This fact is associated with the improvement of diagnostic methods. The first reported patient with POEMS syndrome is a young men suffering of severe pain in the legs. He was diagnosed with chronic demyelinating polyneuropathy and treated with plasmapheresis and immunoglobulin for 6 months. No efficacy was observed. The progressive neuropathy and new symptoms such as edema, shortness of breath caused patients' disability and his admission to intensive care department. The CT scan, USD examination, bone marrow biopsy, echocardiography, serum protein electrophoresis, CBC, blood chemistry were performed. The examination results were not consistent with multiple myeloma disease, monoclonal gammapathy of undetermined significance (MGUS) and chronic inflammatory demyelinating polyneuropathy (CIDP). The deviations that were revealed during analysis were compared with POEMS syndrome diagnostic criteria and made the diagnosis of POEMS syndrome.

Methodology: 13 patients not responding to the standard treatment protocols for polyneuropathy and 4 patients not corresponding with classic multiple myeloma criteria were included in this study. The spectrum of standard examinations included bone marrow biopsy, immune fixation electrophoresis, CT scan, echocardiography, CBC, Blood chemistry, Interleukin 6 and Interleukin 12 levels detection.

Results: The results were promising. In 3 patients treated for polyneuropathy, not responding to treatment and taking morphine due to severe pain the blood electrophoresis revealed low quantity of monoclonal immunoglobulin (M-spike) with Lamda component detected by immune fixation and the CT show sclerotic lesions in the bones. 2 patients with uncommon myeloma symptoms such as specific pulmonary impairment show high level of Interleukin 6 and Interleukin 12, that can cause the pulmonary hypertension.

Conclusion: The new examinations must to be involved in the list of obligatory analysis for neurology disease. The spectrum of analyses (diagnostic criteria) adopted for plasma cell disorder have to be extended including echocardiography and analyses of interleukin 6 and interleukin 12 for the right diagnosis and target therapy.

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