Abstract: PB2030

Title: HYPERCHROMIC ANEMIA AS THE FIRST MANIFESTATION OF MYELOPROLIFERATIVE DISEASE

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Session Title: Myelodysplastic syndromes - Clinical

Background:

Hyperchromic anemia is one of the most common anemias in the emergency department. While the diagnosis of anemia itself is not difficult, the elucidation of its causes is a difficult clinical task. This is largely due to the lack of a clear understanding of the variety of causes that lead to similar red blood cell color characteristics. In this regard, the differential diagnosis of hyperchromic anemia, which is associated only with cyancobalamin/folic acid deficiency, seems relevant.

Aims:

to study the nosology of patients diagnosed with hyperchromic macrocytic anemia (HMA). To evaluate clinical, laboratory blood and bone marrow parameters in patients with HMA.

Methods:

From 01/2021 to 11.2021, 2358 therapeutic patients were admitted to the V.M. Buyanova Hospital, of whom 377 (16%) were patients diagnosed with anemia, of whom 57 (15%) were patients with hyperchromic anemia. Fifty-seven(15%) HMA patients were included in the study. 24 males and 33 females. The age of the patients ranged from 21 to 93 years (Me 70). B12 and folic acid levels were below normal in all patients. All 57 patients underwent bone marrow examination. According to the results of myelogram data the patients were divided into 3 groups: Group 1 38 patients with true B12 folate deficiency anemia, Group 2 11 patients appeared with myelodysplastic syndrome/acute myeloid leukemia (MDS/OML), Group 3 10 patients appeared with secondary HMA (toxic, nephrotic, after chemotherapy).

Results:

We compared the data of the 1st and 2nd groups of patients. The sex composition of both groups did not differ. The age of patients in Group 1 ranged from 32 to 93 years (Me 70), in Group 2 the age was 50-90 years (Me 79). The hemoglobin level in group 1 ranged from 33 to 90 g/dl (Me 60), and in group 2 it was 36-86 g/dl (Me 57). Erythrocyte count in group 1 ranged from 0.85 to 2.35 x 1012/l (Me-1.57), in group 2 from 0.87 to 2.57 (Me-1.53).

Platelet count in group 1 ranged from 24 to 253 x 109/l (Me- 114), in group 2 was 8- 225 x 109/l was from (Me-54) the differences were statistically significant - p=0.029. Leukocyte levels in group 1 were 1.6 to 8.0 x 109/l (Me-4.1), in group 2 were 0.8 to 11.8 x 109/l. LDH levels in group 1 ranged from 344 to 13130 units/l (Me - 4400), in group 2 - 306 to 3022 units/l (Me - 672) differences were statistically significant p=0.004.

Hypercellular bone marrow in group 1 was in 26 patients (68%), in group 2 - in 1 patient (11%). The difference is statistically significant p=0.008

The number of blast cells in myelogram in the 1st group did not exceed 2% (Me-1.6%), in the 2nd group ranged from 7 to 82% (Me - 21%), the difference is statistically reliable p=0.001

The level of megaloblasts in group 1 ranged from 2 to 57(Me 33) , in group 2 from 10 to 21(Me-15).

The overall 2-year survival rate in group 1 was 73%, while in group 2 only 43% p=0.001

Summary/Conclusion:

Despite the availability of vitamin B12 and folic acid testing, patients with HMA require in-depth examination. Thus, 16% of patients with HMA were found to have myeloproliferative diseases - MDS/OML. The overall 2-year survival rate of patients with MDS/OML against GMA background is extremely low. Anemia of extremely severe degree, thrombocytopenia, LDH level not exceeding 2 norms should be an indication for bone marrow hematopoiesis investigation

Keywords: Anemia, MDS