

# **HIPERFERRITINEMIA IN MYELODISPLASTIC SYNDROME(MSD) PATIENTS. CORELATION WITH EVOLUTION AND SURVIVAL.**

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**Background.** Most myelodysplastic (MDS) patients have anemia and many of them require red blood cells (RBC) transfusions leading to iron overload. Hematological improvement during iron chelation therapy was first pointed out more than twenty years ago. This phenomenon seems to be more frequent after introduction of Deferasirox. The most simple test assessing iron overload is serum ferritin concentration .

**Aims.** Assessment of hyperferritinemia incidence in MDS patients at the moment of MDS diagnosis, and correlation between ferritin level and evolution an survival in patients diagnosed with MDS.

**Methods.** The retrospective data collection from a single center experience (Department of Hematology County Hospital, Timisoara, Romania) between January 2005 and December 2014 included 131 patients (73men and 58 women) with MDS. All the patients had complete blood count and serum ferritin level, and complete follow-up data.

**Results.** Ferritin level above 1000 ng/mL was found in 45 patients (31%) (Group 1) and ferritin level  $\leq 1000$  ng/mL in 86 patients (69%) (Group 2). Most patients with significant hiperferritinemia, were RBC transfusion dependent (78% of patients). Among patients with ferritin level  $\leq 1000$  ng/mL, 36% were RBC transfusion dependent. Serum hemoglobin concentration was lower in Group 1 patients in comparison with Group 2 patients (7,3 g/dL vs 9,6 g/dL,  $p < 0,001$ ). The most frequent MDS subtype in Group 1, were patients with refractory anemia (RA) (31%), compared with patients with ferritin  $\leq 1000$  ng/mL - 14% ( $p < 0,04$ ). According to IPSS score, there were no differences between studied groups. Median follow up was 14 months. There was an improved overall survival (OS) in RBC transfusion independent patients compared to RBC transfusion dependent patients, but mean OS was not significantly statistically different in studied groups. No correlation was found between ferritin level and time to acute myeloid leukemia(AML) transformation.

**Conclusions.** Hiperferritinemia  $> 1000$  ng/mL does not influence survival and time to AML transformation in MDS patients. The most frequent MDS subtype in patients with ferritin level  $> 1000$  ng/mL was MDS RA. Among patients with ferritin level  $> 1000$  ng/mL 81% were RBC dependent.