

BIOLOGIC EXPLORATIONS IN FERRIPTIVE ANEMIA

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Abstract

The most important characteristic of the molecule of hemoglobin is its capacity to be attached weakly and reversibly with the oxygen.

The main function of the hemoglobin in the body is that of connecting the oxygen in the lungs and to set it free easily in the peripheral capillary tissues where the gas pressure of the oxygen is much smaller than that from the lungs.

Key words: oxygen, capillary, ferriptive anemia, molecule.

INTRODUCTION

By the decrease of the total quantity of Iron in the body it can lead to the deficit of iron, whose last stage is the ferriptive anemia. Due to the high frequency the ferriptive anemia is disease with social implications, especially for children and women. Also, it is a symptom, sometimes the only one of this disease; the discovery of the primary disease eliminates the cause of the anemia and makes the ferrotherapy efficient.

The first description of the ferriptive anemia is from the 16th century with the name of "morbus virginum" because it appeared at girls of 14-17 years old. In the 19th century it was recognized the connection between anemia, hypochromia and the deficit of iron. Thus Pierre Bland presented in 1832 the favorable result of the therapy with green copperas and chlorosis.

- determining the utility of the laboratory tests;
- hematologic tests (hematocrit, hemoglobin, reticulocyte, erythrocytes indices, peripheral smear with erythrocytes morphology);

MATERIAL AND METHODS.

In order to accomplish the objectives proposed it was used a prospective study.

In this regard was created a group of 45 patients with the diagnosis of Ferriptive anemia. The patients come from the Hematology ward of the Oradea Municipal Hospital, being admitted during the year 2012.

Each of these patients were given blood analyses, determining: the hematology and biochemical tests.

The determinations were made respecting the following conditions :

- *Preparing the patient* - à jeun (before eating the meal);
- *Sample specimen* - venous blood;
- *Sample container* – vacutainer with sodium citrate 0.105 M (report sodium citrate – blood=1/9);
- *Sample quantity* – as much as the vacuum allows; in order to prevent the partial coagulation of the sample was assured the correct mixture of the blood with the preservative, by movements of inversion of the tube (5-6 mild inversions);
- *Causes of rejecting the sample* - vacutainer which is not full (at least 90%); hemolysate or coagulated sample, the sample taken in another tube than with citrate;
- *Necessary processing after the sample* – the sample was centrifuged 15 minutes at 2500g;
- *The stability of the sample* – the sample is stable 8 hours at the temperature of the room; the separate plasma is stable 3 weeks at -20°C; >1 year at -70°C. Before the analysis, the refrigerated samples were deiced fast in 3-5 min at 37°C. The deice at smaller temperatures can lead to cryoprecipitation.

RESULTS AND DISCUSSIONS

The bioclinical explorations were observed at 90 patients with ferriptive anemia.

Table no. 1

Distribution of the cases depending on the value of the hemoglobin.

Hemoglobin (g)	Ferriptive anemia	
	N	%
13 – 15	0	0
15 – 12	5	6
12 – 10	80	93
10 - 8	5	1
Total	90	100

Even if the diagnostic of ferriptive anemia become easier by determining the blood test and the sideremy, the early evaluation of the prognostic remains a clinical challenge in the beginning stage of the disease.

The decrease of the concentration of Hb, with concomitant hypocromia (HEM< 27pg, CHEM< 30%) and the affection of the number of red corpuscles is absent.

CONCLUSIONS.

The determining of the blood test indicates normal value of the erythrocytes series, at over 75% of the patients with ferriptive anemia; regarding the haematocrit and hemoglobin, all the patients with ferriptive anemia had decreased values.

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