

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Diagnosis And Treatment Peculiarities Of Anemic Syndrome In Women With Reproductive System Pathology.

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ABSTRACT

Anemia is a syndrome that follows plenty of pathological and some physiological conditions. Women are at much higher risk for developing anemic syndrome. It is a really urgent gynecological issue that should not be underestimated. The most common reason for developing iron deficiency in women is menorrhagia. Despite anemia being fairly easy to diagnose, the lack of knowledge in the field of hematology contributes to the diffusion and aggravation of anemic processes. An introduction of the register for patients with anemic syndrome into clinical practice of all kinds of doctors would be of great interest for studying this pathology. The suggested system for managing the process of diagnosis and treatment helps optimize the data collection, improve the diagnostic search, and justify treatment of the patients.

Keywords: register, anemic syndrome, gynecology, system for managing the process of diagnosis and treatment.

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INTRODUCTION

The aim of the study is to optimize data collection on the structure of morbidity for anemic syndrome, improve the quality of diagnosis and treatment of patients, improve health care routing and reduce economic costs.

MATERIALS AND METHODS

Since 2016, data on the anemic syndrome in patients of the department of gynecology in Voronezh Emergency Hospital №1 have been collected and the dynamics of the pathology during the hospital stay has been analyzed.

The authors came up with the automated register for patients with anemic syndrome that allows to obtain the reliable and up to date data on the structure of morbidity for anemic syndrome in any department of the multidisciplinary medical institution. The authors certified the computer program in question (certificate № 2015662657 of the Russian Federation).

The data stored in the register have been divided into two parts:

The passport data and the examination results. Detailed information on the objective data, comorbidities and previous treatment related to the anemic syndrome can be added to the register. Results of the clinical and laboratory examinations during in patient care can also be added to certain fields of the register. Reliability of the raw data is monitored on the basis of protocols for diagnosis and treatment of diseases accompanied by anemic syndrome approved by the Ministry of Health of the Russian Federation in accordance with the requirements of ICD-10.

Among the diseases of the blood and blood-forming organs D50-D53, D55-D59, D60-D64 are fixated. Entering the data to the register can be done by individuals who legally have access to this kind of information with the use of a personal login and password. Currently the register contains data on 217 patients of department of gynecology with hemoglobin levels less than 120 g/l.

RESULTS AND DISCUSSION

The register included data on 217 women with the hemoglobin levels less than 120 g/l, the average age of the patients being 53,5 years old (18 years min, 89 max). The most common reasons for hospital admissions were excessive, frequent and irregular menstruation and benign neoplasms of the ovary (Table 1).

Table 1: Reasons for hospital admissions in women with anemic syndrome

ICD-10 code	Diagnosis	Incidence
N92	Excessive, frequent and irregular menstruation	31%
D27	Benign neoplasms of ovary	12%
N83	Noninflammatory disorders of ovary, fallopian tube and broad ligament	9%
N75	Diseases of Bartholin gland	6%
N94	Pain and other conditions associated with female genital organs and menstrual cycle	6%
D26	Other benign neoplasms of uterus	5%
D25	Leiomyoma of uterus	4%
N70	Salpingitis and oophoritis	3%
-	Other	24%

Out of 217 patients with anemic syndrome, 166 women were diagnosed with iron deficiency anemia (IDA) as a concomitant disease, among them 1 patient with the combination of IDA and B12-deficient anemia. Serum iron concentration was determined in 100 women of the group. Only 24 of them had lowered serum iron levels. Nevertheless, women with both low and normal serum iron levels received iron supplements, some

of them without the preliminary lab testing for serum iron. Recommendations on the further intake of iron supplements during outpatient care were also not on point (Figure 1).

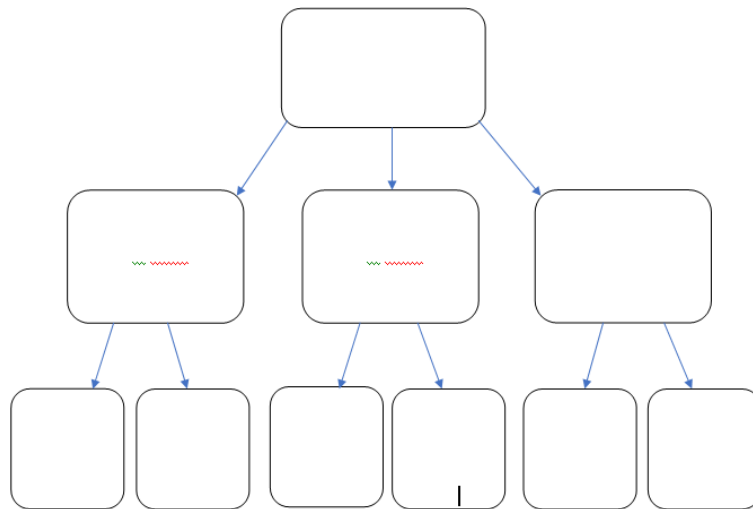


Figure 1: The group of patients that were diagnosed with IDA.

The second group of the patients included women with the diagnosis of IDA as a result of meno- and metrorrhagias. Among 26 patients, serum iron levels below $10,7 \mu\text{mol/l}$ were found in 9 patients - they received iron supplements and were given adequate recommendations at hospital discharge. Patients with the normal serum iron content as well as the ones that weren't tested also received iron supplements (Figure 2).

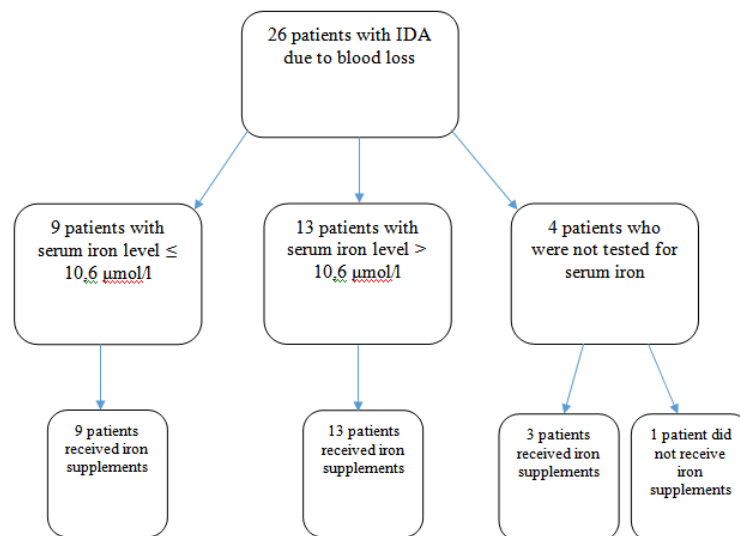


Figure 2: The group of patients with IDA due to blood loss.

The third group consisted of 25 patients with anemia not included in the diagnosis. Among them, only 4 women had lowered serum iron concentrations. Iron supplements were prescribed to 15 patients of the group (Figure 3).

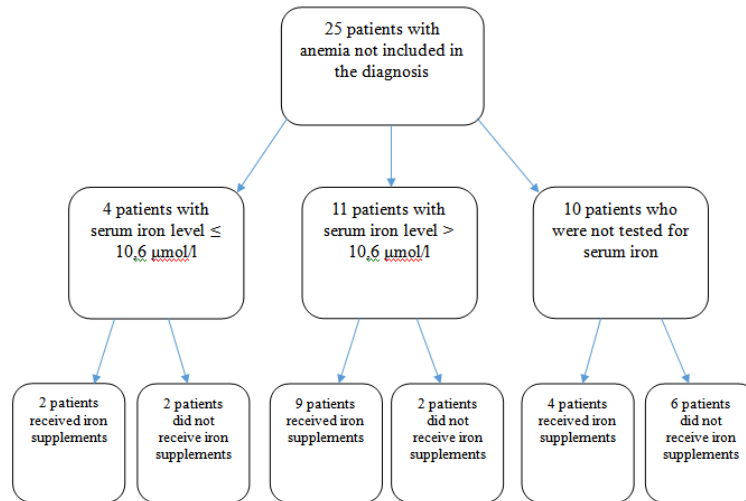


Figure 3: The group of patients with anemia not included in the diagnosis.

It's worth noting that not a single patient of the department of gynecology was tested for serum ferritin that indicates the body's iron stores and is one of the main tools for differential diagnosis between latent and manifest iron deficiency. That is why the diagnosis of IDA and iron supplements prescription can be considered unreasonable in the majority of the women that took part in the study.

In addition to the results of laboratory and instrumental examinations the register suggests adding data on other symptoms of IDA such as sideropenic syndrome, sensitivity disorders, ataxia, paresthesias, tongue discoloration, difficulty swallowing, loss of appetite etc. But none of those symptoms were present in medical histories of the patients.

CONCLUSIONS

1. Among the patients of the department of gynecology with the levels of hemoglobin less than 120 g/l IDA was diagnosed as a concomitant condition in 166 (76%) of the cases. But the diagnosis can only be justified in 24 (11%) of the patients with lowered serum iron contents.
2. Out of 26 (12%) of the patients with IDA as a result of blood loss, serum iron levels lower than 10,7 $\mu\text{mol/l}$ were found in 9 individuals (4%).
3. Patients suffering from menorrhagia/metrorrhagias should also be tested for ferritin, total iron-binding capacity of the serum, and transferrin saturation that can confirm the presence of IDA even in the individuals with high serum iron content. These tests can also be used for latent iron deficiency detection in patients with hemoglobin concentration of more than 120 g/l and for the justification of iron supplements prescription.
4. The etiology of anemic syndrome requires clarification in 180 (83%) of the cases. This kind of patients should have their gastrointestinal tracts thoroughly examined including colonoscopy (mandatory for older patients), fiberoptic gastroduodenoscopy, and abdominal ultrasound; as well as have chest x-ray done.
5. The lack of universal protocols and standards of medical care for patients with anemic syndrome in the non-core hospital setting results in the not always adequate iron supplements prescriptions. Other types of anemia are not even looked into for differential diagnosis.
6. The register of the patients with anemic syndrome reflects practical activity of a doctor and demonstrates the actual use of standards for diagnosis and treatment in medical practice.

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