



Study of the prevalence of myelodysplastic syndrome in Uzbekistan

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Abstract

The characteristics of myelodysplastic syndrome (MDS) morbidity among the population of the Republic of Uzbekistan were studied. The material for the study was the analysis of medical records of patients with MDS registered at the Republican Specialized Scientific and Practical Medical Center of Hematology of the Republic of Uzbekistan from 2010 to 2020. Analysis of the dynamics of MDS morbidity from 2010 to 2020 indicates a marked increase in the incidence of new cases of MDS in the Republic in 2016-2020, which is most likely due to improved diagnosis of the disease due to the introduction of high-tech diagnostic methods. The highest rates of MDS registration are in the age group of people from 41 to 70 years old.

Background

Myelodysplastic syndromes (MDS) are a heterogeneous group of clonal blood disorders characterized by cytopenia, signs of myelopoiesis disorders, and a high risk of transformation into acute myeloblastic leukemia

The prevalence of MDS in the Republic of Uzbekistan has not been practically studied so far. Meanwhile, analysis and prediction of epidemiological indicators of the disease are extremely necessary for planning and timely specialized hematological care. In this connection, the study of MDS morbidity peculiarities in our Republic is a very important and urgent problem of

Objective

To study the peculiarities of myelodysplastic syndrome (MDS) morbidity among the population of the Republic of Uzbekistan.

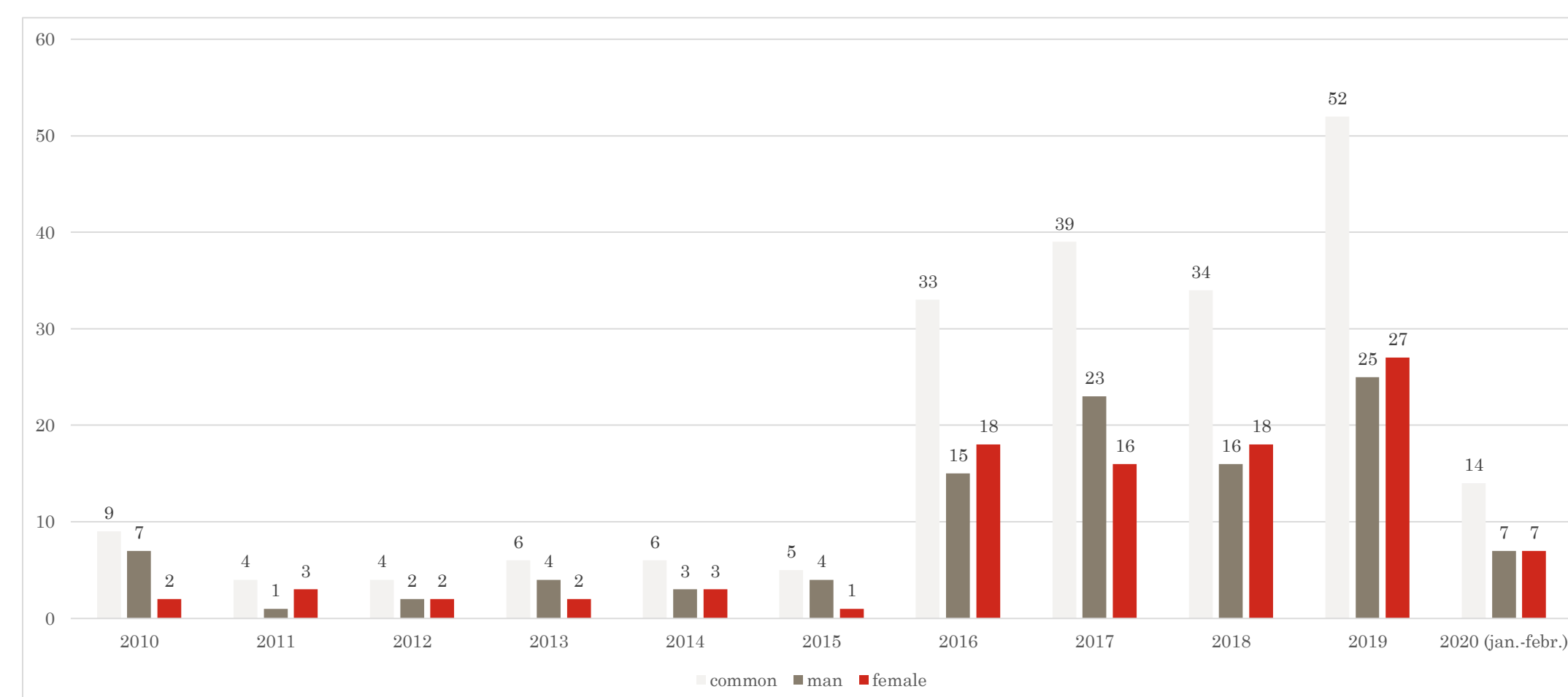


Figure 1. The rate of new MDS cases per year for the period 2010-2020. in the Republic of Uzbekistan

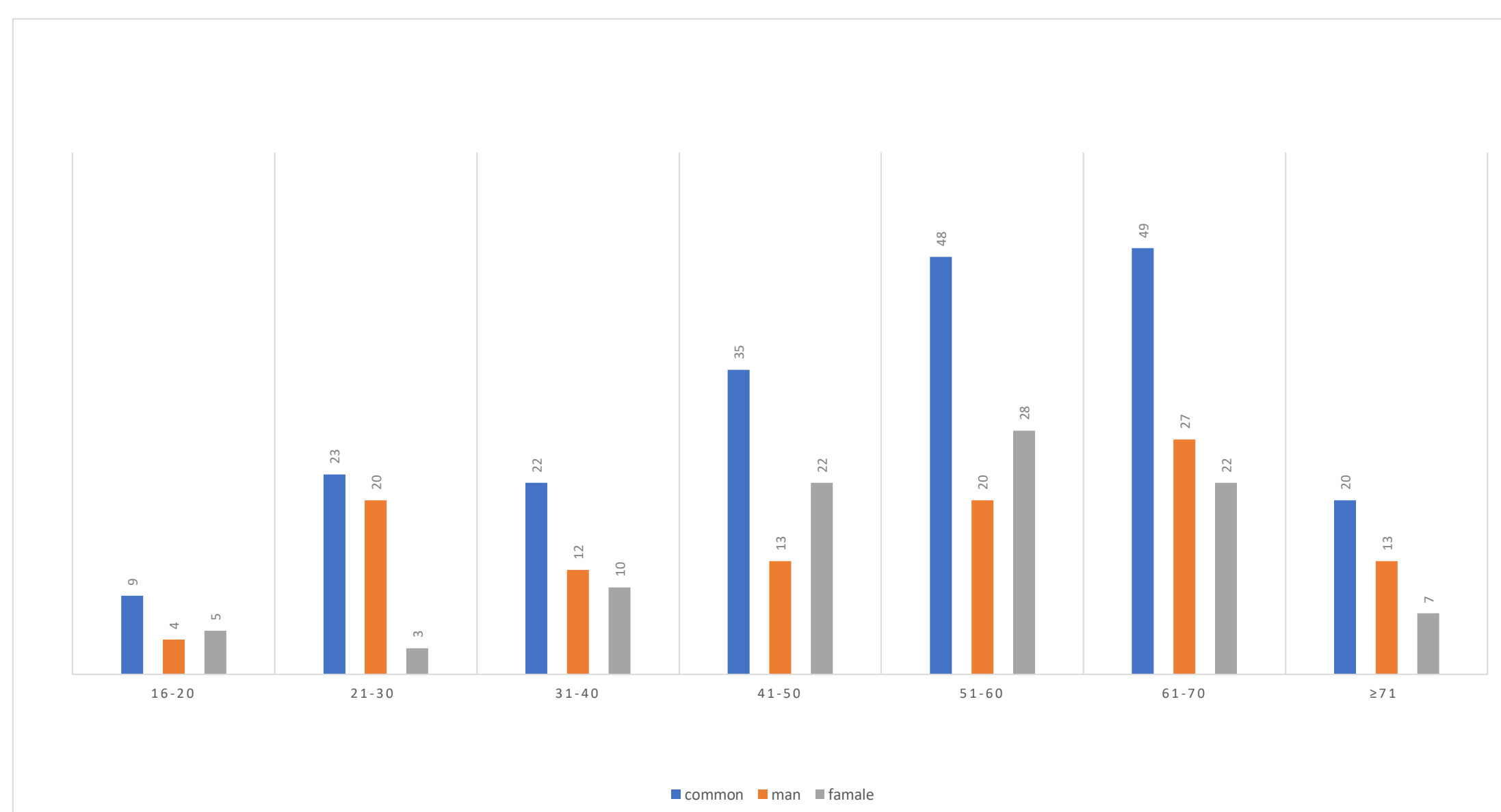


Figure 2. The incidence rate depending on the age category of MDS patients

Materials & Methods

The data of the retrospective analysis of the medical records of the registered patients with MDS in the Republican Specialized Scientific and Practical Medical Center of Hematology (RSNSPMCH) for the period from 2010 to 2020 were used as the material for the study. MDS diagnosis was verified taking into account standard criteria according to WHO (2008, 2017) on the basis of general specialized clinical examination of patients, laboratory methods: general detailed clinical blood analysis, myelogram, blood cytogenetic study. Statistical processing of the obtained data was performed on a personal computer using a package of standard statistical programs "Statistic for Windows, 2017".

Results and their discussion

Analysis of retrospective study of medical records of MDS patients registered and enrolled at the RSNPMCH of the Ministry of Health from 2010 to 2020 allowed us to determine the average number of patients in the Republic of Uzbekistan with 20.3 new cases per year. In particular in 2010 the annual incidence of MDS was 9 cases, in 2011 and 2012 - 4 cases, in 2013 and 2014 - 6 cases, in 2015 - 5 cases. - 5 cases in 2015. Starting from 2016 this indicator increased sharply and amounted to 33 new cases this year, in 2017. - 39, in 2018 - 34, in 2019 - 52, while in 2020 only in two months (January-February) 14 new cases were registered (see Figure 1.).of standard statistical programs "Statistic for Windows, 2017".

During the period from 2010 to 2020 the total number of registered patients in the Republic of Uzbekistan was 206 cases, among which men were registered in 107 cases and women in 99 cases.

From the given data it is obvious that the rate of primary morbidity for the period 2016-2020 in comparison with the period 2010-2015 has increased by 5.1 times.

We found it interesting to study the features of the incidence of the disease depending on the age category at the time of diagnosis. Our study showed that median age of patients at the time of diagnosis was 50.9±4.05 years (men - 50.1±4.2 years, women - 49.6±4.3 years) (see Figure 2).

Discussion

Summarizing the above data, we can conclude that the analysis of MDS morbidity in the Republic of Uzbekistan allows primarily monitoring the epidemiological situation with respect to this pathology. Meanwhile, it should be noted that the lower incidence of MDS in the provinces of the Republic is probably associated with its unreliable diagnosis due to the fact that in most cases MDS debuts with anemic syndrome and less often with a combination of anemic and hemorrhagic syndromes. In addition, anemia detected in the early stages of the examination is often hypochromic and microcytic, which is quite often regarded by specialists as an iron deficiency state. In this regard, the determination of serum iron and ferritin levels in the verification of the diagnosis is necessary, and attention should be paid to the fact that more often the development of the disease occurs in persons over 50 years of age, which should alert the doctor about the possible onset of MDS. Undoubtedly, consideration of these facts will allow a correct diagnosis and timely initiation of targeted therapy for MDS.

Conclusion

1. The analysis of MDS morbidity dynamics from 2010 to 2020 indicates a marked increase in the frequency of new cases of MDS in the Republic in 2016-2020, which is most likely due to the improvement of diagnosis of the disease due to the introduction of high-tech methods of diagnosis.
2. The highest rates of MDS registration are in the age category of persons from 41 to 70 years old.
3. The high incidence of MDS in Tashkent is probably due to both the large population and the correct approach to diagnosis.