EPIDEMIOLOGY AND ISSUES OF EARLY DIAGNOSIS OF IRON DEFICIENCY ANEMIA AMONG ADDICTED POPULATION

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Abstract: Anemia is a serious public health concern in most of the developing countries and modern literature indicates that there has been a significant growth in its rates, especially among the population with lower living standards. These cases increase social tension among population and arise numerous medico-biological problems which may lead to CND (Chronic Non-communicable diseases). Additionally, it is a common knowledge that drug addicted part of the population are predisposed to IDS (Iron Deficiency Syndrome) and IDA (Iron Deficiency Anemia).

The development of unfavorable epidemiological conditions in relation to iron deficiency states in the population of drug addicts is to varying degrees associated with the above 27 risk factors and 6 pathological conditions. The presence of alimentary (6), behavioral epidemiological (6), lipid (3), non-lipid biochemical (3) and microelementous (3) factors, as well as associated pathological conditions (6), significantly often leads to the formation of IDS and increases the relative the risk of developing a continuum from them.

Key words: iron deficiency animia, epidemiology, risk factors, diagnosis, prevention.

INTRODUCTION

In recent decades, more and more attention is paid to epidemiological studies and they cover some factors influencing the growth of substance abuse and the prevalence of chronic diseases among population [7,14,15,16]. At the same time, special importance is attached to the studies with contribution to the formation of drug addiction and the course of these diseases. However, this area is not studied well enough and there are still lots of unsolved problems with lack of attention. The problem of screening for early diagnosis and prevention of IDS has been actualized. This has several surveys among the drug addicted population: 1) traditionally, the problem of drug addiction belongs to specialists in drug addiction department, while the growing prevalence of psychoactive substances, which has crossed the threshold of the concept of "epidemic", does not allow these specialists to cope with the flow of patients; 2) the well-known comorbidity of the "drug-addict patient", which includes a combination of several nosological forms, including IDS, which increases in proportion to the length of time of psychoactive substances use, highlights the most important clinical events, the correction of which is mainly directed by routine clinical medical care; 3) the lack of clear epidemiological data, adequate screening and IDP prevention programs against the background of drug addiction has led to an increase in the number of anemic complications, which in turn have a significant impact on the duration and quality of life of the drug addict patient. [31,32,34,35,36]

This indicates the need for special epidemiological studies and the implementation of their results at the primary level of medical care for drug addicts with IDS.

MATERIALS AND METHODS

In the paradigm of the Uzbek health care system, the problem of population screening for IDS and IDA should be a priority task with a large number of patients at the doctors of therapeutic specialties. The literature provides extensive information on the prevalence of IDS among non-addicted population (IDSANP), and among the addicted population, such results are practically absent [Table 1].

Table 1: Prevalence and incidence of IDS according to various studies

№	Authors	Year of Study	IDS	Prevalence
1	WHO [48]	1998	IDS	• 1.8 billion people suffer from IDS • Latent anemia affects 3.6 billion people • IDA ranks 1st among 38 diseases
2	Clarc R. et al. [44]	2004	IDA	10% of elderly people
3	Carmel R. [43]	2001	ACD (ANEMIA OF CHRONIC DISEASES)	15% of the elderly population
4	Boulton F. et al. [42]	2000	IDA and ACD together	• among men over 65 years old 90 per 1000 people • among women over 65 years old, 65 per 1000 people
5	Scholl T.O. et al. [45]	2000	IDA	16.6% of the elderly population
6	Beutler E. et al. [41]	2005	IDA	10-12% of older people
7	Bokarev I.N. and others. [11]	1998	IDA	• 30% of children under 2 years old • 60% of pregnant women • 30% of women of childbearing age
8	Alieva A.D. [1]	2001	IDA	80% of women of fertile age
9	Yusupova M.A. [40]	2002	IDA	87.4% of teenage girls
10	Badritdinova M.N. [5]	2008	Anemic syndrome	96.04% of women 20-69 years old
11	Lazebnik L.B. and others. [29]	2001	IDA	10-15% of elderly people
12	Kovaleva L.G. [28]	2003	IDA	10% of elderly people
13	Report of the statistical department of RUz [33]	2006	IDA	95.4% in the general structure of morbidity
14	Ganieva M.G. and others. [17]	1993	IDS	• 60% of children at risk
15	Buglanov A.A., et al. [12]	1994	IDS	• 5-10% of a healthy child population

As can be seen from the data presented in Table 1, IDSANP is a common disease and this pathology mainly affects persons of the younger age group, women of fertile age (FA) and pregnant women. Thus, according to WHO (1998), about 1.8 billion people suffer from IDS, latent anemia is detected in 3.6 billion people and IDA ranks first among 38 pathological conditions [WHO, 1998].

The frequency of IDA detection in different countries and populations according to the data of various authors was: IDA according to Clarc R. et al. (2004) - in 10% of elderly people [44], according to Carmel R. (2000) - ACD in 15% of the elderly population [43], according to Boulton F. et al. (2000) - a combination of IDA and ACD - in men over 65 years old 90 per 1000 people and in women over 65 years old 65 per 1000 people [42], according to Scholl T.O. et al. (2000) - IDA in 16.6% of the elderly population [45], according to E. Beutler et al. (2005) - IDA in 10-12% of elderly people [41], according to IN Bokarev. et al. (1998) - IDA in 30% of children under 2 years of age, in 60% of pregnant women and in 30% of WFA (Women of Fertile Age) [11], according to Alieva A.D. (2001) - IDA in 87.4% of adolescent girls [40], according to MN Badritdinova. (2008) - anemic syndrome in 96.04% of women 20-69 years old [5], according to Lazebnik LB. et al. (2001) IDA - in 10-15% of the elderly and senile population [29], according to the results obtained by L.G. Kovaleva. (2003) - IDA in 10% of elderly people [28], according to the reports of the statistical department of the Republic of Uzbekistan (2006) IDA - 95.4% in the general structure of morbidity [33], according to MG Ganieva. et al. (1993) IDS - in 60% of children at risk and in 5-10% of a healthy child population [17] and according to the results of the study by A.A. Buglanov. et al. (1994) IDS - at the level of 9488.71 per 100,000 children under 14 years of age [12].

Similar data to these results are given by other researchers: with regard to anemia of various origins, S.M. Manaeva et al. (2007) - in Russia [30], D.N. Suleimanova et al. (2005,2008) - about IDA in risk groups - the population of Uzbekistan [37,38,39], E. Burnevich (2008) - about the frequency of anemia in case of abuse of anemia against the background of infection by a researcher from Russia G. Khasanova, R.A. Bisalieva et al. (2008) - about the peculiarities of changes in hemoglobin in the blood of drug addicts [6], I.I. Amonov (2004) - with railway pregnant women [2,3], F.M. Ayupova (1995) - about the IDA in the population of girls [4], OM. Bogdanova (2003) - on hypochromic anemias in elderly and senile people [8], K.Zh. Boltaev et al. (2002,2006) - about the anemic state in the elderly [9,10], A.L. Vertkin et al. (2007) - about IDA among various population groups [13], A.L. Smut et al. (2002) - about IDA and its complications in the conditions of Russia [18], S.A. Gusieva (2002) - about anemias associated with impaired iron metabolism [19], M.E. Davronov - about IDA in adolescents [20], I. Davydkin (2009) - about anemic syndrome [21], L.I. Dvoretsky (2001) - in relation to ACD in the elderly [22], L.L. Eremenko et al. (1994) - about the railway in various ecological regions of Russia [23], G. Zh. Zharylkasynova et al. (2006,2007) - on the prevalence of anemia in old age [24,25], Z.E. Zhuraeva (2007) - about the IDS in various population groups [26] and D.K. Kalandarov (2002) - about the frequency of IDS in the population of the characteristic biogeochemical zone of southern Uzbekistan [27].

Judging by the data presented, IDS is a massive and most common pathological condition. The prevalence of IDS has regional, gender and age characteristics.

The same works indicate that the severity of IDA varies from latent ID (does not cause visible disturbances on the part of internal organs) to IDA (causes severe pathological changes in various body systems).

Further, researchers from far and near abroad almost equally argue that the relevance of IDA and IDA is determined by their widespread prevalence among all segments of the population and their influence on the hematological continuum.

RESULTS AND DISCUSSION

It deserves to be noted that it is impossible to determine the true incidence of IDS in the population with drug addiction from the data presented, and it is difficult in the non-drug population due to the lack of unified epidemiological criteria and standardized research methods. Nevertheless, they allow us to draw a conclusion about the approximate level of prevalence of ID, ACD and IDA among the population. They make us think seriously that the most promising method of the true frequency of ID, IDS and IDA are strictly unified epidemiological studies, or the generally accepted global strategy for the prevention and reduction of the continuum in IDA is the prevention and early detection of these conditions. This position was formulated by WHO experts, the results of large population studies and on the basis of the clinical fact - the absence of the "main" symptoms of ID before the onset of severe anemic syndrome [46,47].

On the other hand, in the last decade, a number of studies have been published that have proven the assumptions that ID develops during certain periods of a person's life: in children, in the population of early and late adolescence, in the population of adolescence and young age, in women of fertile age, in pregnant women, in old and senile age. The development of ID in the noted periods of the population's life is mainly associated with iron deficiency, nutritional deficiency, medical and social factors, problems of nutrient consumption, demographic catastrophe, climatic-geographical and environmental factors, alcoholism and drug addiction and the presence of extragenital pathologies or chronic non-infectious diseases [49, 50].

It should be noted that the noted results on the prevalence of IDS and IDA mainly refer to the population group of non-narcotic populations. The value of early screening diagnosis of IDS in drug addicts for outcome / continuum and prognosis is only discussed in the scientific literature. Obviously, the problem of IDS in drug addicts alone will not be able to solve narcologists without therapists, as well as without preventive recommendations that scientists should give to practicing doctors based on the results of special population studies among non-drug users.

In general, the analysis of the available information in the modern literature shows that there is an increase in the incidence of drug addiction throughout the world. This increases social tension and gives rise to medico-biological problems, in particular with regard to the early detection and correction of NCD and IDS in the population of drug addicted populations. These data increasingly substantiate the need to adjust the therapeutic or hematological work taking into account the growing tension in the narcological situation, which has already formed the basis for the allocation of a new priority area - epidemiological narcology.

Consequently, it seems interesting and logical to clarify in an epidemiological study the characteristics of the response of the blood system during drug intoxication and to study the population mechanisms of development of ID, IDS and IDA against the background of drug addiction.

CONFLICT OF INTERESTS AND CONTRIBUTION OF AUTHORS

The authors declare the absence of obvious and potential conflicts of interest related to the publication of this article and report on the contribution of each author.

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No ethical approval is needed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

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