

Genesial health of teenage girls with inflammatory diseases of generative organs between 1984-1994 in Grodno area

Zdrowie rozrodcze nastoletnich dziewcząt z chorobami zapalnymi narządów rozrodczych w latach 1984-1994 w regionie Grodna

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Wstęp. Zapotrzebowanie na badania wynika z ich braku oraz z analitycznych ocen potrzeby wypracowania metod zachowania i poprawy zdrowia rozrodczego (GH) kobiet w wieku rozrodczym.

Cel. Przeprowadzenie retrospektywnych badań zdrowia rozrodczego (GH) u kobiet w wieku 15-17 lat, cierpiących na choroby zapalne narządów rozrodczych (IDGO).

Materiał i metody. Podejście systemowe posłużyło jako baza metodologiczna badania. Na podstawie państwowych danych statystycznych zbadano poziom występowania i parametry GH u kobiet w wieku 15-17 lat w regionie Grodna w latach 1984-1994.

Wyniki. W latach 1984-1994 IDGO u nastoletnich dziewcząt stanowiły 2 miejsce w strukturze odnotowanych chorób ginekologicznych i wynosiły $22.46 \pm 3.23\%$. Przez dekadę wskaźnik występowania podstawowych chorób IDGO zwiększył się o 32.7% i osiągnął 3.8/1000 w roku 1994. W latach 1984-1994 wskaźnik ogólnego występowania podstawowych chorób IDGO zwiększył się o 34.2% i w roku 1994 osiągnął 4.6/1000. Podczas badań etiologicznej struktury IDGO ustalono, że przeważały niespecyficzne zakaźne choroby zapalne – $62.14 \pm 4.26\%$. Jednakże u co trzeciej dziewczyny cierpiącej na vulvovaginitis choroba miała specyficzną etiologię. Najczęściej występowała candidiasis vulvovaginitis, która w strukturze chorób zapalnych vulvovaginitis osiągała $28.36 \pm 3.27\%$. Zmiany w układzie endokrynologicznym i immunologicznym związane z wiekiem w naszej opinii można uznać za patologię „drugorzędną”. Szczególnie biorąc pod uwagę, że znaczna liczba dziewcząt z candidosis vaginalis cierpiała na choroby systemu trawiennego. Infekcje narządów płciowych w strukturze candidosis vaginalis u nastoletnich dziewcząt wynosiły $9.12 \pm 0.63\%$.

Wniosek. Odnotowane wielokrotne korelacje zaburzeń żeńskiego układu rozrodczego i medyczno-społecznej charakterystyki nastoletnich dziewcząt z IDGO stwarzają zwiększone medyczno-społeczne ryzyko, a zachowanie ich możliwości rozrodczych stanowi złożony problem.

Słowa kluczowe: zdrowie rozrodcze, choroby zapalne narządów rozrodczych

Introduction. The research urgency is defined by absence of studies and the conforming analytical assessments for working out expert approaches and methods on conservation and improvement of genesial health (GH) in the given contingent of women of reproductive age.

Aim. To carry out retrospective research of GH status in women aged 15-17 years with inflammatory diseases of generative organs (IDGO).

Material and methods. The systemic approach served as a methodological basis of the research. On the basis of the State statistical data the levels of case rate and GH parameters of women aged 15-17 years in the Grodno region for 1984-1994 were investigated.

Results. In 1984-1994 IDGO in teenage girls in the structure of the recorded gynecologic diseases reached $22.46 \pm 3.23\%$ – the second rating place. During a decade the indicator of primary IDGO case rate increased by 32.7% and reached 3.8/1000 in 1994. In 1984-1994 the indicator of general IDGO case rate of teenage girls increased by 34.2% and in 1994 reached 4.6/1000. Studying the etiological IDGO structure it was possible to establish that nonspecific infectious inflammatory diseases prevailed – $62.14 \pm 4.26\%$. However in every third girl with vulvovaginitis the disease had specific etiology. The most frequent was the candidiasis vulvovaginitis which in the structure of inflammatory diseases of vulva and vagina reached $28.36 \pm 3.27\%$. Age rearrangement of endocrine and immune systems of teenagers, in our opinion, can be surveyed as a „secondary” pathology. Especially considering that the appreciable number of girls with candidosis vaginalis had concomitant diseases of digestive system. Sexual infections in the structure of candidosis vaginalis in teenage girls reached $9.12 \pm 0.63\%$.

Conclusion. The recorded multiple correlations of disorders of female genesial system and medico-social characteristics of teenage girls with IDGO create an increased medico-social „risk”, and their GH conservation is a multi-component problem.

Key words: genesial health, inflammatory diseases of generative organs

Introduction

Intensive dynamics of life of a postindustrial society, acceleration of socio-economic transformations strengthen the influence of a social factor on health status of women [1, 2, 3], being a reliable indicator characterizing the level of development of civil institutions in the country [4]. The population reproduction, physical and mental health of the future generations are directly connected to health status of women [5, 6, 7]. Therefore our special interest in genesial health status (further – GH) of women [8, 9, 10].

In modern conditions one of the groups of increased social «risk» are teenage girls with inflammatory diseases of generative organs (further – IDGO) whose health status defines potential and genesial possibilities of the society.

The research urgency is defined by the absence of studies and the conforming analytical assessments for working out expert approaches and methods on conservation and improvement of GH in the given contingent of women of reproductive age [11, 12].

Aim

To carry out a retrospective research of GH status of women aged 15-17 years with IDGO.

Material and methods

The systemic approach served as a methodological basis of the research. On the basis of the State statistical data the levels of case rate and GH parameters of women aged 15-17 years in the Grodno region for 1984-1994 were investigated. Statistical data processing was made with the use of EXCEL and STATISTICA 6.0 software programs.

Results

In 1984-1994 IDGO in teenage girls in the structure of recorded gynecologic diseases reached $22.46 \pm 3.23\%$ - the second rating place (fig. 1).

During a decade the indicator of primary IDGO case rate increased by 32.7% and reached 3.8 in a 1000 population in 1994. In 1984-1994 the indicator of general IDGO case rate of teenage girls increased by 34.2% and in 1994 reached 4.6 in a 1000 population.

Studying the nosological structure of IDGO recorded for the first time it was established that the range of vulvovaginites of various etiologies reached $63.38 \pm 3.43\%$; the second rating place was taken by inflammatory diseases of uterus appendages – $27.74 \pm 2.83\%$. The range of bartholinites reached $4.82 \pm 0.92\%$. The relative density of other inflammatory diseases did not exceed 4% (fig. 2).

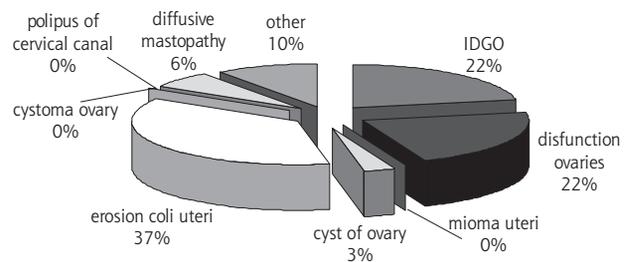


Fig.1. Structure of recorded gynecologic pathologies in teenage girls between 1984-1994

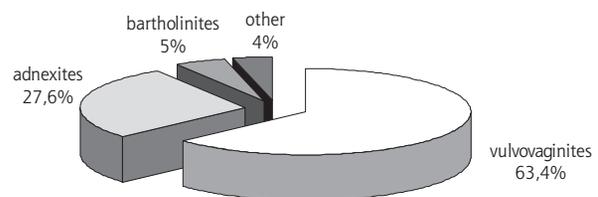


Fig. 2. Nosological structure of recorded gynecologic pathologies in teenage girls between 1984-1994

During a decade the amount of recorded cases of inflammatory diseases of uterus appendages increased for the first time by 1.7 times ($p < 0.05$), and vulvovaginites of various etiologies – by 1.8 times ($p < 0.05$).

In 1984-1994 the indicator of the IDGO general case rate of teenage girls increased by 34.2% and in 1994 reached 4.6 in a 1000 population.

In the nosological structure of IDGO general case rate vulvovaginites of various etiologies ($52.67 \pm 3.12\%$) also prevailed. However the scope of inflammatory diseases of uterus appendages – $39.36 \pm 3.31\%$ – at the expense of augmentation of chronic forms of pathology – increased and considerably exceeded a similar indicator in a contingent of women of 18-49 years of age ($p < 0.05$), and was a consequence of disadvantages of prophylactic medical examination at the level of primary medical care ($r = 0.7274$). The scope of bartholinites reached $4.41 \pm 0.73\%$. The relative density of other inflammatory diseases did not exceed 4%.

Studying the etiological IDGO structure it was possible to establish that nonspecific infectious inflammatory diseases prevailed – $62.14 \pm 4.26\%$ (fig. 3).

However in every third girl with vulvovaginitis the disease had specific etiology.

The most frequent was the candidiasis vulvovaginitis which in the structure of inflammatory diseases of vulva and vagina reached $28.36 \pm 3.27\%$. Age rearrangement of endocrine and immune systems of teenagers, in our opinion, can be surveyed as a „secondary” pathology. Especially considering that the appreciable number of girls with candidosis vaginalis had concomitant diseases of digestive system.

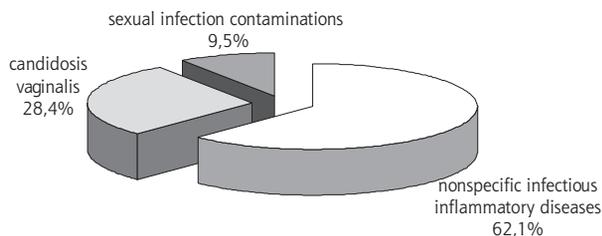


Fig. 3. Etiological structure of vulvovaginites in teenage girls between 1984-1994

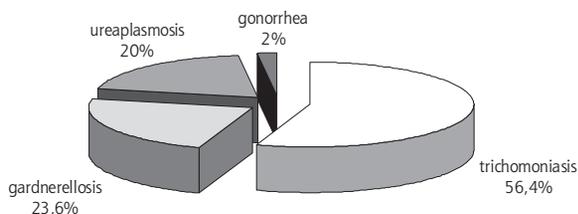


Fig. 4. Structure of recorded sexual infections in teenage girls between 1984-1994

Sexual infections in the structure of candidosis vaginalis in teenage girls reached $9.12 \pm 0.63\%$.

The first place in the structure of sexual infection was taken by trichomoniasis – $56.46 \pm 3.49\%$ (fig. 4).

It was a consequence of social and economic problems at the beginning of 1990-ies ($r=0.8379$), which led to uncontrolled sexual relations in the given contingent of women ($r=0.8194$).

The second rating place in the case rate structure of sexual infections was taken by a bacterial vaginosis (in 1984-1994 it was registered as a sexual infection) – $23.56 \pm 4.28\%$. The scope of miko- and ureaplasmoses reached a little more than 20% – accordingly $12.12 \pm 1.87\%$ and $8.97 \pm 0.89\%$. Single instances of gonorrhoea were annually registered.

The tendency of augmentation of general case rate of sexual infections in teenage girls was registered: with $0.72 \pm 0.41\%$ in 1984 to $1.59 \pm 0.12\%$ in 1994. Thus among the sexual infections trichomoniasis considerably prevailed – $76.81 \pm 2.72\%$, the scope of others sexual infections did not exceed 5%.

High enough level of general case rate of sexual infections, first of all, trichomoniasis, was a consequence of low coverage by outpatient clinics observation ($r=-0.8167$) which reached only $53.52 \pm 3.47\%$ of subjects, together with long-term absence of standardized approaches. In the majority of districts a prophylactic medical examination was not organized. Efficacy of prophylactic medical examination reached only $50.34 \pm 5.38\%$. Besides, there was practically no continuity in medical care rendered to any given mobile contingent of patients: change of residence or high school at entering colleges, universities. Medical documentation was not transferred from one clinic to another; therefore further medical observation was not carried out ($r=0.7351$).

It is established that only $10.05 \pm 1.42\%$ of teenage girls were under medical observation for inflammatory diseases of uterus appendages: the dominating form was exacerbation of chronic salpingitis. Their hospitalization was carried out „spontaneously”, without accurate standardized clinical indications uncovered during preventive examination. 10-15 patients, among 10% of whom pelviperitonites had been diagnosed, were annually hospitalized, which considerably worsened the forecast of generative function ($r=0.6692$).

Early beginning of sexual life, except for augmentation of primary and general case rate sexual infections, as a consequence had also a high case rate of erosions of neck of uterus ($r=0.8142$), taking the first rating place in the structure of recorded gynecologic pathologies – $37.12 \pm 2.19\%$. Besides, early sexual contacts were the cause of 50-70 unplanned pregnancies annually reported by doctors of female consultation offices, and augmentation of number of abortions as a basic method of birthrate adjustment ($r=0.8073$). $76.46 \pm 2.36\%$ of all abortions were executed by a curettage method; others – by a vacuum-aspiration method (at over 5-6 weeks of pregnancy). Of effective abortions $88.88 \pm 1.24\%$ discontinued first pregnancy which was extremely unfavorable for the subsequent GH status and realization of genesial function ($r=0.8724$). The problem is also the fact that modern hormonal contraceptives appear inaccessible to the majority of teenage girls because of their high cost ($r=0.7439$).

The frequency of detected sexual infection in teenage girls was higher than in women of more senior fecundity age ($p<0.05$). The same tendency applies to inflammatory diseases of uterus appendages ($p<0.05$).

It was possible to establish that immediately after abortion complications were registered in $3.12 \pm 0.29\%$ of patients, basically, in the form of bleedings. Among abortion complications it is necessary to include inflammatory diseases of organs of a small pelvis, registered in $1.23 \pm 0.24\%$ of teenage girls. In 1 year after pregnancy termination the number of teenage girls with disorders of female genesial system increased almost twice.

The augmentation of IDGO case rate of teenage girls was accompanied by various forms of menstrual function disorders ($r=0.8276$) which doubled and reached $22.23 \pm 1.58\%$ in the structure of recorded gynecologic pathologies during a decade (the third rating place).

The primary case rate of teenage girls during a decade was increased by menstrual cycle disorders by 36.4% and reached 3.9 in a 1000 population. The general case rate reached 4.5 in a 1000 population.

Studying age dynamics of case rate by menstrual function disorders in teenage girls, and also patients

of more senior genesial age (18-49 years), it was established that frequency and growth of case rate were much higher in teenage girls (fig. 5).

Primary and general case rate disorders of menstrual cycle had a similar structure: the first rating place was taken by irregular character of a menses ($38.51 \pm 3.14\%$), the second – algodysmenorrhea ($30.82 \pm 2.46\%$), and, the last decade scope increased almost twice ($p < 0.05$) (fig. 6).

The third rating place among menstrual function disorders was taken by juvenile uterine bleedings which last decade scope increased and in 1994 reached $12.26 \pm 2.18\%$ ($p < 0.05$).

The research and analysis of dynamics of case rate allowed for recording interrelation between progressing GH deterioration in teenage girls, shown menstrual function disorders and augmentation of extra-genital case rate.

Doctors of teenage medical service annually registered more than 17000 extra-genital diseases at 90% – level of coverage by routine inspections.

The basic first-time recorded extra-genital diseases were: diseases of a respiratory organs – $24.26 \pm 3.18\%$, diseases of digestive system – $9.96 \pm 1.35\%$ (mainly gastritis and duodenitis – $72.45 \pm 2.86\%$), blood diseases – $9.76 \pm 2.19\%$ (mainly anemia – $84.63 \pm 3.51\%$). Diseases of endocrine system were recorded in $8.68 \pm 2.64\%$ of teenage girls: in their structure thyroid gland dysfunction reached $95.34 \pm 1.18\%$. The fifth rating place in the structure of recorded extra-genital pathologies the diseases of genitourinary system reached $6.18 \pm 0.59\%$, in their structure the acute and chronic pyelonephritis reached $45.84 \pm 4.28\%$. Diseases of ENTs-bodies were recorded in $4.27 \pm 0.82\%$ of teenagers, mainly an adenoid disease – $70.15 \pm 1.69\%$ (fig. 7).

The increase of diseases of the genitourinary system and anemia was registered at $53.83 \pm 6.26\%$ ($p < 0.05$), their number increased twice ($p < 0.05$).

It was possible to establish that the indicator of general case rate of extra-genital pathologies in teenage girls also increased: from $67.82 \pm 3.14\%$ – in 1984 to $85.65 \pm 4.26\%$ – in 1994 ($p < 0.05$).

The basic groups of diseases were: diseases of a respiratory organs – $18.63 \pm 5.47\%$, blood diseases – $13.65 \pm 2.89\%$ and diseases of digestive system – $11.58 \pm 1.83\%$. Diseases of endocrine system were suffered by $9.21 \pm 3.75\%$ of teenage girls, diseases of blood coagulation – by $4.91 \pm 2.24\%$ of patients, diseases of genitourinary system – by $4.68 \pm 1.34\%$ of girls. Diseases of nervous system and of bodily senses registered in $4.38 \pm 0.59\%$ of teenage girls. However, despite high enough level of general case rate, only $74.64 \pm 2.46\%$ were captured by medical observation.

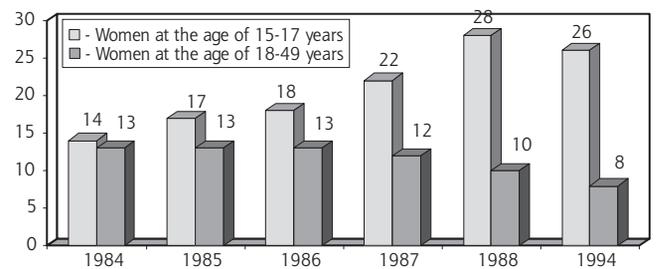


Fig. 5. Dynamics of a case rate of menstrual functions disorders between 1984-1994 (in 1000 women of fecundity age)

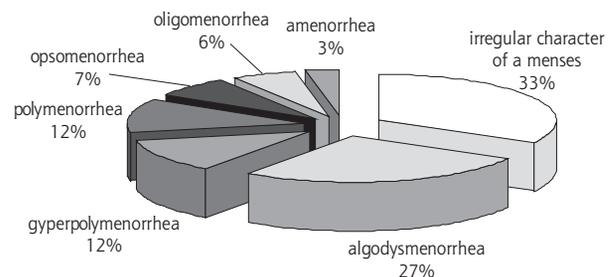


Fig. 6. Structure of disorders of menstrual cycle in teenage girls between 1984-1994

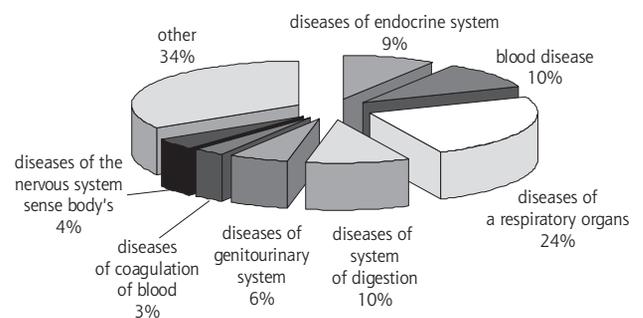


Fig. 7. Structure of recorded extra-genital pathologies in teenage girls between 1984-1994

Steady direct correlation between the level of a primary case rate disorders of menstrual cycle and levels of a primary case rate of thyroid gland dysfunctions in teenage girls ($r=0.7538$), anemia ($r=0.7421$), pyelonephritis ($r=0.7038$) and adenoid diseases ($r=0.6528$) were recorded. In turn, folliculogenesis and steroid genesis disorders of ovaries became the cause of development of female genesial system disorders ($r=0.9362$). The decrease in immune mechanisms of protection and body resistance led to the development of IDGO synchronization ($r=0.7649$).

Conclusion

The recorded multiple correlations of disorders of female genesial system and medico-social characteristics of teenage girls with IDGO create an increased medico-social „risk”, and their GH conservation is a multi-component problem.

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