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GIRTH AND TRANSVERSE BODY DIMENSIONS IN UKRAINIAN YOUNG WOMEN WITH GENITAL ENDOMETRIOSIS WITHOUT AND TAKING INTO ACCOUNT SOMATOTYPE

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Annotation. Determining the features of the body structure in women with gynecological diseases is an important direction of modern scientific research. Anthropometric characteristics can reflect complex relationships between the constitutional features of the body and pathological processes. Assessment of these parameters allows us to expand our understanding of individual risk factors. This creates the prerequisites for the development of new approaches to diagnosis and prevention. The aim of the study was to establish the features of girth and transverse body dimensions in Ukrainian young women with genital endometriosis without and taking into account the somatotype. In 89 Ukrainian young women (aged 16 to 18 years) with genital endometriosis, the girth and transverse body dimensions were determined. The control group consisted of the initial girth and transverse body dimensions of 78 practically healthy Ukrainian young women of a similar age group taken from the data bank of the National Pirogov Memorial Medical University, Vinnytsya Research Center. Statistical processing was performed in the licensed package “Statistica 6.0” using non-parametric methods for evaluating the results. As a result of the conducted studies, it was found that in patients with genital endometriosis young women without taking into account the somatotype and representatives of different somatotypes, the girth dimensions of the body have significantly smaller values, or tendencies towards smaller values (more pronounced in groups without taking into account the somatotype and in ecto-mesomorphs), and the width of the distal epiphyses of the upper limb, the transverse lower thoracic and anterior-posterior mid-thoracic diameters are, on the contrary, significantly larger than the corresponding indicators of practically healthy young women of similar groups. In addition, in patients young women without taking into account the somatotype and representatives of the mesomorphic somatotype, the width of the distal epiphysis of the thigh is significantly smaller than in practically healthy young women of similar groups. Larger values of the width of the distal epiphyses of the upper extremities in young women patients against the background of smaller values of the width of the distal epiphyses of the thigh are a manifestation of the “subpathological” constitutional type in girls with genital endometriosis. When comparing the girth dimensions of the body between young women patients of different somatotypes, in most cases significantly larger values were found in representatives of the mesomorphic somatotype; and when comparing transverse dimensions, in most cases significantly smaller values were found in representatives of the ectomorphic somatotype.

Keywords: obstetrics and gynecology, genital endometriosis, Ukrainian young women, anthropometry, girth and transverse body dimensions, somatotype.

Introduction

Endometriosis is a chronic inflammatory disease characterized by the presence of endometrial-like tissue outside the uterine cavity, which can cause intense pain, menstrual irregularities, and infertility. The disease is common among women of reproductive age, and its global prevalence, according to systematic reviews, is from 10 to 15 % among all women and up to 50 % among patients with infertility [17, 21]. In Australia, the overall incidence of diagnosed endometriosis among women aged 18-45 years is 11 %, and among those seeking medical care for chronic pelvic pain, the rate can exceed 30% [19]. At the same time, in the USA, the incidence of new cases among women of reproductive age is 1.6 % per year, and the overall prevalence of diagnosed endometriosis in studies ranges from 2 to 10 % [4]. The prevalence of endometriosis can vary considerably in Europe and Asia, due to both diagnostic features and genetic predisposition [15, 25].

Endometriosis significantly affects women's quality of life, causing significant physical, emotional, and social consequences. Debilitating chronic pelvic pain, dyspareunia, dysuria, and dyschezia significantly limit daily living and are

associated with an increased incidence of anxiety disorders and depression [6]. Studies have shown that women with endometriosis have a 2-3-fold higher rate of depression and anxiety compared to the general population [6, 7]. An Austrian study found that over 50 % of patients have moderate or high levels of anxiety, and one in three suffer from depression [6]. In addition, studies conducted among adolescents have shown that endometriosis significantly affects their socialization and academic activities, leading to an increase in missed days of school and a decrease in academic performance [7].

The disease also has a significant economic burden, due to both direct medical costs and indirect costs due to loss of work capacity. In the United States, the average annual economic burden of endometriosis per patient is estimated at \$12,118, of which 63 % is due to indirect costs due to reduced work productivity [26]. Surgical treatment, which is often necessary, also creates a significant financial burden: endometriosis-related surgeries increase total medical costs by 66 % compared with patients who did not undergo surgery [27].

In addition to the general impact on health, the course of

endometriosis may vary depending on individual characteristics of the organism, including morphological characteristics of the body [2, 25]. The study of structural parameters of the body in women with endometriosis may provide additional information about the pathophysiological aspects of the disease, as well as contribute to the development of individualized approaches to diagnosis and treatment. This is especially important in the context of personalized medicine, which is gaining increasing importance in modern gynecology.

The purpose of the study is to establish the characteristics of girth and transverse body dimensions in Ukrainian young women with genital endometriosis without and taking into account somatotype.

Materials and methods

At the Department of Obstetrics and Gynecology of the National Pirogov Memorial Medical University, Vinnytsya, a clinical, laboratory and anthropological examination of 89 Ukrainian young women (YW) (aged 16 to 18 years) with genital endometriosis was conducted. The study was carried out within the framework of the research work of the Department of Obstetrics and Gynecology No. 1 of the National Pirogov Memorial Medical University, Vinnytsya: "Prediction and prevention of disorders of the development and function of the female reproductive system in different age periods and correction of detected disorders" (state registration number 0116U005804). Committee on Bioethics of National Pirogov Memorial Medical University, Vinnytsya (protocol № 11 from 3.12.2020) found that the studies do not contradict the basic bioethical standards of the Declaration of Helsinki, the Council of Europe Convention on Human Rights and Biomedicine (1977), the relevant WHO regulations and laws of Ukraine.

The diagnosis of genital endometriosis was made according to the updated guidelines of the European Society of Human Reproduction and Embryology (ESHRE) on the management of women with endometriosis [1].

Circumferential (circumferences of the shoulder in a tense state – OBP, shoulder in a relaxed state – OBPL, forearm in the upper third – OBPR, thigh – OBB, lower leg in the upper third – OBG, chest on inspiration – OBGKV, chest on expiration – OBGKH, chest in a calm state – OBGKS) and transverse (width of the distal epiphyses of the shoulder – EPPL, forearm – EPPR, thigh – EPB and lower leg – EPG; transverse mid-thoracic diameter – PSG, transverse lower thoracic diameter – PNG, anterior-posterior mid-thoracic diameter – SGK) body dimensions were measured according to the scheme of Bunak V. V. as modified by Shaparenko P. P. [23]. The somatotype was determined by the Heath-Carter method [3]. The following distribution by somatotype of patients with genital endometriosis YW was established: endomorphs – 1; mesomorphs – 45; ectomorphs – 23; ecto-mesomorphs – 12; endo-mesomorphs – 2; average intermediate somatotype – 6.

As a control group, the initial girth and transverse body dimensions of 78 practically healthy Ukrainian YW of a

similar age group were taken from the data bank of the National Pirogov Memorial Medical University, Vinnytsya Research Center.

Statistical processing of the obtained results was carried out in the licensed package "Statistica 6.0" using non-parametric methods. The mean values (M) and standard square deviation (σ) were determined for each characteristic. The reliability of the difference in values between independent quantitative values was determined using the Mann-Whitney U-criterion.

Results. Discussion

The results of determining the girth dimensions of the body, the width of the distal epiphyses of the long tubular bones of the limbs, and the diameters of the trunk in practically healthy and patients with genital endometriosis of Ukrainian YWs without and taking into account the somatotype are given in Tables 1 and 2.

Table 1. Comparison of body circumferences between practically healthy and patients with genital endometriosis YW in general and different somatotypes ($M \pm \sigma$, cm).

Indicators	Groups				p3-4	p3-5	p4-5
	generally	meso-morphs	ecto-morphs	ecto-meso-morphs			
1	2	3	4	5	6	7	8
OBP – healthy	26.52±2.68	27.74±1.88	23.46±1.91	26.89±2.43	<0.001	>0.05	<0.001
OBP – sick	22.94±2.21	24.37±1.90	20.90±0.99	21.38±1.14	<0.001	<0.001	>0.05
p	<0.001	<0.001	<0.001	<0.001			
OBPL – healthy	25.08±2.55	26.45±1.88	22.15±1.71	25.24±1.91	<0.001	<0.05	<0.001
OBPL – sick	25.64±2.29	26.97±2.18	23.59±1.23	24.50±0.77	<0.001	<0.001	<0.05
p	>0.05	>0.05	<0.01	>0.05			
OBPR – healthy	22.94±1.78	23.79±1.24	21.18±1.36	23.46±2.17	<0.001	>0.05	<0.001
OBPR – sick	21.19±2.04	22.47±1.77	19.46±1.14	19.68±1.21	<0.001	<0.001	>0.05
p	<0.001	<0.01	<0.001	<0.001			
OBB – healthy	51.54±3.95	52.94±3.31	47.57±3.32	51.46±2.42	<0.001	>0.05	<0.01
OBB – sick	47.03±3.49	49.07±2.93	44.78±3.22	45.17±1.85	<0.001	<0.001	>0.05
p	<0.001	<0.001	<0.05	<0.001			
OBG – healthy	34.37±2.37	35.42±1.89	31.87±1.97	34.61±1.71	<0.001	>0.05	<0.001
OBG – sick	33.33±3.16	34.28±3.49	31.46±1.99	34.08±2.61	<0.001	>0.05	<0.01
p	<0.05	<0.05	>0.05	>0.05			
OBGKV – healthy	84.70±7.07	84.58±7.28	81.09±4.59	83.81±8.96	=0.081	>0.05	>0.05
OBGKV – sick	83.15±5.10	85.16±4.83	80.83±4.98	79.50±2.28	<0.01	<0.001	>0.05
p	>0.05	>0.05	>0.05	>0.05			
OBGKH – healthy	77.76±6.68	77.94±6.77	73.87±4.78	76.34±6.96	<0.05	>0.05	>0.05
OBGKH – sick	73.91±5.05	75.76±4.60	72.17±4.45	69.58±3.34	<0.01	<0.001	>0.05
p	<0.001	>0.05	>0.05	<0.01			
OBGKS – healthy	80.22±6.72	80.29±6.88	76.38±4.47	79.62±7.78	=0.054	>0.05	>0.05
OBGKS – sick	78.46±5.25	80.44±4.81	76.17±4.74	74.33±3.28	<0.01	<0.001	>0.05
p	=0.060	>0.05	>0.05	=0.072			

When analyzing the differences in body circumference sizes between the corresponding groups of patients with genital endometriosis and practically healthy YW, it was established (see Table 1): in patients with genital endometriosis, regardless of somatotype, there were significantly

Table 2. Comparison of transverse body dimensions between practically healthy and patients with genital endometriosis YW in general and different somatotypes (M \pm σ , cm).

Indicators	Groups				p3-4	p3-5	p4-5
	generally	meso-morphs	ecto-morphs	ecto-meso-morphs			
1	2	3	4	5	6	7	8
EPPL – healthy	5.831 \pm 0.474	5.871 \pm 0.385	5.623 \pm 0.424	5.840 \pm 0.748	=0.063	>0.05	>0.05
EPPL – sick	6.318 \pm 0.536	6.373 \pm 0.576	6.096 \pm 0.442	6.433 \pm 0.470	<0.05	>0.05	<0.05
p	<0.001	<0.001	<0.01	<0.01			
EPPR – healthy	4.849 \pm 0.401	4.907 \pm 0.310	4.715 \pm 0.415	4.914 \pm 0.415	=0.060	>0.05	>0.05
EPPR – sick	5.475 \pm 0.494	5.616 \pm 0.488	5.270 \pm 0.436	5.467 \pm 0.492	<0.01	>0.05	>0.05
p	<0.001	<0.001	<0.001	<0.01			
EPB – healthy	8.227 \pm 0.501	8.424 \pm 0.383	7.920 \pm 0.397	8.251 \pm 0.519	<0.001	>0.05	<0.05
EPB – sick	8.058 \pm 0.515	8.189 \pm 0.458	7.774 \pm 0.543	8.067 \pm 0.401	<0.001	>0.05	>0.05
p	<0.05	<0.05	>0.05	>0.05			
EPG – healthy	6.388 \pm 0.457	6.331 \pm 0.465	6.317 \pm 0.344	6.557 \pm 0.523	>0.05	>0.05	>0.05
EPG – sick	6.485 \pm 0.431	6.536 \pm 0.422	6.322 \pm 0.448	6.525 \pm 0.267	=0.066	>0.05	>0.05
p	>0.05	=0.056	>0.05	>0.05			
PSG – healthy	24.66 \pm 1.45	24.95 \pm 1.26	24.00 \pm 1.50	24.50 \pm 1.34	=0.071	>0.05	>0.05
PSG – sick	26.17 \pm 3.56	26.52 \pm 3.73	24.52 \pm 2.92	27.33 \pm 3.65	<0.05	>0.05	<0.05
p	<0.001	>0.05	>0.05	<0.05			
PNG – healthy	20.78 \pm 1.79	20.59 \pm 1.73	20.00 \pm 1.61	20.93 \pm 1.81	>0.05	>0.05	>0.05
PNG – sick	23.88 \pm 2.87	24.21 \pm 3.07	22.50 \pm 2.49	24.58 \pm 2.47	<0.05	>0.05	<0.05
p	<0.001	<0.001	<0.001	<0.001			
SGK – healthy	16.85 \pm 1.39	17.05 \pm 1.20	15.93 \pm 1.20	17.29 \pm 1.60	<0.01	>0.05	<0.01
SGK – sick	20.29 \pm 1.78	20.49 \pm 1.90	19.65 \pm 1.52	20.75 \pm 1.70	>0.05	>0.05	=0.068
p	<0.001	<0.001	<0.001	<0.001			

($p<0.05$ - 0.001) smaller, or a tendency ($p=0.060$) to smaller values of the circumferences of the shoulder in a tense state (by 13.50 %), the forearm in the upper third (by 7.63 %), the thigh (by 8.75 %), the lower leg in the upper third (by 3.03 %), the chest on exhalation (by 4.95 %) and the chest in a calm state (by 2.19 %); *in patients with genital endometriosis mesomorphs* – significantly ($p<0.05$ - 0.001) lower values of shoulder girth in a tense state (by 12.15 %), forearm in the upper third (by 5.55 %), thigh (by 7.31 %) and lower leg in the upper third (by 3.22 %); *in patients with genital endometriosis ectomorphs* – significantly ($p<0.05$ - 0.001) lower values of shoulder girth in a tense state (by 10.91 %), forearm in the upper third (by 8.12 %) and thigh (by 5.87 %), as well as significantly ($p<0.01$) higher values of shoulder girth in a non-stressed state (by 6.50 %); *in patients with genital endometriosis ecto-mesomorphs* – significantly ($p<0.01$ - 0.001) smaller, or a tendency ($p=0.072$) to smaller values of shoulder girths in a tense state (by 20.49 %), forearm in the upper third (by 16.11 %), thigh (by 12.22 %), chest on exhalation (by 8.86 %) and chest in a calm state (by 6.64 %).

When analyzing the differences in body circumference sizes between patients with genital endometriosis YW of different somatotypes, it was established (see Table 1): *in patients with genital endometriosis mesomorphs compared to ectomorphs* – significantly ($p<0.01$ - 0.001) greater values of shoulder circumferences in tense and non-tense states (by 14.24 % and 12.53 %, respectively), forearm in the upper third (by 13.40 %), thigh (by 8.74 %), lower leg in the upper third (by 8.23 %), chest during inhalation, exhalation and in

a calm state (by 5.08 %, 4.74 % and 5.31 %, respectively); *in patients with genital endometriosis mesomorphs compared to ecto-mesomorphs* – significantly ($p<0.001$ in all cases) higher values of shoulder girths in tense and relaxed states (by 12.27 % and 9.16 %, respectively), forearm in the upper third (by 12.42 %), thigh (by 7.95 %), chest during inhalation, exhalation and in a calm state (by 6.65 %, 8.16 % and 7.60 %, respectively); *in patients with genital endometriosis ectomorphs compared to ecto-mesomorphs* – significantly ($p<0.05$ - 0.001) lower values of shoulder girths in a relaxed state (by 3.71 %) and lower leg in the upper third (by 7.69 %).

When analyzing the differences in transverse body dimensions between the corresponding groups of patients with genital endometriosis and practically healthy YW, it was established (see Table 2): *in patients with genital endometriosis, regardless of somatotype*, there were significantly ($p<0.001$ in all cases) larger values of the width of the distal epiphyses of the shoulder and forearm (by 7.71 % and 11.43 %, respectively), transverse mid-thoracic, lower thoracic and anterior-posterior mid-thoracic diameters (by 5.77 %, 12.98 % and 16.95 %, respectively), as well as significantly ($p<0.05$) smaller values of the width of the distal femoral epiphysis (by 2.05 %); *in patients with genital endometriosis mesomorphs* – significantly ($p<0.001$ in all cases) larger, or a tendency ($p=0.056$) to larger values of the width of the distal epiphyses of the shoulder and forearm (by 7.88 % and 12.62 %, respectively), transverse lower thoracic and anteroposterior mid-thoracic diameters (by 14.95 % and 16.79 %, respectively), as well as significantly ($p<0.05$) smaller values of the width of the distal femoral epiphysis (by 2.79 %); *in patients with genital endometriosis ectomorphs* – significantly ($p<0.01$ - 0.001) larger values of the width of the distal epiphyses of the shoulder and forearm (by 7.76 % and 10.53 %, respectively), transverse lower pectoral and anteroposterior mid-thoracic diameters (by 11.11 % and 18.93 %, respectively); *in patients with genital endometriosis ecto-mesomorphs* – significantly ($p<0.05$ - 0.001) larger values of the width of the distal epiphyses of the shoulder and forearm (by 9.22 % and 10.26 %, respectively), transverse mid-thoracic, lower pectoral and anteroposterior mid-thoracic diameters (by 10.35 %, 14.85 % and 16.67 %, respectively).

When analyzing the differences in transverse body dimensions between patients with genital endometriosis YW of different somatotypes, it was established (see Table 2): *in patients with genital endometriosis mesomorphs compared to ectomorphs* – significantly ($p<0.05$ - 0.001) larger, or a tendency ($p=0.066$) to larger values of the width of the distal epiphyses of the shoulder, forearm, thigh and lower leg (by 4.35 %, 6.16 %, 5.07 % and 3.27 %, respectively), transverse mid-thoracic and lower thoracic diameters (by 7.54 % and 7.06 %, respectively); *in patients with genital endometriosis ectomorphs compared to ecto-mesomorphs* – significantly ($p<0.05$ in all cases) smaller, or a tendency ($p=0.068$) to smaller values of the width of the distal epiphysis of the shoulder (by 5.24 %), transverse mid-thoracic, lower thoracic and anterior-posterior mid-thoracic diameters (by 10.28 %, 10.28 %, 10.28 %, respectively).

8.46 % and 5.30 %, respectively). No significant or trends in differences in transverse body dimensions were found between patients with genital endometriosis YW *mesomorphic* and *ecto-mesomorphic* somatotypes.

Studies of the relationship between anthropometric parameters and endometriosis have shown mixed results. Some authors indicate a relationship between body mass index (BMI) and the risk of developing endometriosis, while other studies deny it. A number of studies have noted that low BMI may be associated with an increased risk of endometriosis ($r=-0.28$; $p<0.05$) [22, 28]. At the same time, high BMI, on the contrary, correlates with a lower risk of this disease ($r=0.35$; $p<0.05$) [11, 16]. Studies also indicate that women with normal body weight may have an intermediate level of risk of developing this pathology, which indicates a possible nonlinear nature of the relationship between BMI and the development of endometriosis [5].

In addition to BMI, girth and transverse body dimensions are important. It was found that waist-to-hip ratio has no statistically significant effect on the development of endometriosis ($p>0.05$), but the mean waist circumference in women with this disease is lower compared to controls ($p<0.01$) [9, 16]. In addition, mid-shoulder circumference also shows a significant difference between groups ($p=0.03$) [9]. In addition, studies have shown that other parameters of the somatotype, in particular the ratio of chest circumference to waist circumference, may have an impact on the incidence of endometriosis [10].

The results of numerous studies confirm the relationship between body weight and the risk of developing endometriosis, but note differences depending on the stage of reproductive age. In premenopausal women, a significant correlation was found between increased BMI and the risk of developing endometrial cancer ($OR=1.89$; 95 % CI: 1.45-2.47) [8, 14]. At the same time, the risk of developing this disease increases with increasing body weight throughout life ($p<0.001$) [13]. In addition, the influence of hormonal status on the relationship between BMI and endometriosis remains the subject of further research, since some studies indicate different intensity of manifestation of this relationship depending on the level of estrogens and progesterone [20].

Regarding the role of obesity in the pathogenesis of endometriosis, the results of studies remain controversial. Some authors suggest that increased BMI contributes to the development of chronic inflammation and increased estrogen levels, which may have some influence on the development of endometriosis. However, in most cases, there is an inverse correlation between BMI and the risk of endometriosis ($r=-0.31$; $p<0.01$) [12, 28]. It has been noted that local deposition of adipose tissue in the abdomen and thighs may have a greater impact on the risk of endometriosis than total body weight [29].

The relationship between body weight and the risk of endometrial cancer deserves special attention, since these diseases have similar pathogenetic mechanisms. Meta-analysis confirmed that BMI is an important risk factor for endometrial cancer ($RR=1.57$; 95 % CI: 1.42-1.74) [24]. In addition, the genetic risk of developing this disease increases in the presence of obesity ($p<0.001$) [18]. Analysis of the data indicates that the interaction of genetic factors and changes in the hormonal background may significantly affect the prevalence of both endometriosis and endometrial cancer [5].

Thus, the results obtained indicate the importance of anthropometric characteristics in the development of endometriosis and other gynecological diseases. Further studies are needed to clarify the mechanisms of the relationship between somatotype and the risk of developing this pathology, as well as to determine the role of genetic and hormonal factors in this process.

Conclusions and prospects for further development

1. Most of the body circumferences in patients with genital endometriosis YW without taking into account the somatotype and representatives of the *ecto-mesomorphic* somatotype (most pronounced), as well as most of the limb circumferences in patients of the *mesomorphic* and *ectomorphic* somatotypes are significantly smaller, or tend to be smaller, compared with the corresponding indicators of practically healthy YW of similar groups. When comparing the circumferences between patients YW of different somatotypes, in most cases significantly larger values were found in representatives of the *mesomorphic* somatotype.

2. In all groups of patients with genital endometriosis YW, the width of the distal epiphyses of the upper limb, the transverse lower thoracic and anteroposterior mid-thoracic diameters are significantly larger, and the width of the distal femoral epiphysis in YW patients without taking into account the somatotype and representatives of the *mesomorphic* somatotype, on the contrary, are significantly smaller, compared with the corresponding indicators of practically healthy YW of similar groups. When comparing the transverse dimensions between YW patients of different somatotypes, in most cases significantly larger values were established in representatives of the *mesomorphic* somatotype and in more than half of cases in YW of the *ecto-mesomorphic* somatotype than in representatives of the *ectomorphic* somatotype.

3. The established discrepancies in the width of the distal epiphyses of the long tubular bones of the limbs are a manifestation of a "subpathological" constitutional type in YW patients with genital endometriosis.

In further studies, it is planned to study the features of other anthropometric indicators in YW patients with genital endometriosis without and taking into account the somatotype.

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ОСОБЛИВОСТІ ОБХВАТНИХ І ПОПЕРЕЧНИХ РОЗМІРІВ ТІЛА В УКРАЇНСЬКИХ ДІВЧАТ, ХВОРИХ НА ГЕНІТАЛЬНИЙ ЕНДОМЕТРІОЗ БЕЗ ТА З УРАХУВАННЯМ СОМАТОТИПУ

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Анотація. Визначення особливостей будови тіла у жінок із гінекологічними захворюваннями є важливим напрямом

сучасних наукових досліджень. Антропометричні характеристики можуть відображати складні взаємозв'язки між конституційними особливостями організму та патологічними процесами. Оцінка цих параметрів дозволяє розширити уявлення про індивідуальні фактори ризику. Це створює передумови для розробки нових підходів до діагностики та профілактики. Метою дослідження було встановлення особливостей обхватних і поперечних розмірів тіла в українських дівчат, хворих на генітальний ендометріоз без та з урахуванням соматотипу. У 89 українських дівчат (віком від 16 до 18 років), хворих на генітальний ендометріоз, проведено визначення обхватних і поперечних розмірів тіла. Контрольну групу склали первинні обхватні та поперечні розміри тіла 78 практично здорових української дівчат аналогічної вікової групи, взяті з банку даних науково-дослідного центру Вінницького національного медичного університету ім. М. І. Пирогова. Статистичну обробку проводили в ліцензійному пакеті «Statistica 6.0» з використанням непараметричних методів оцінки отриманих результатів. У результаті проведених досліджень встановлено, що у хворих на генітальний ендометріоз дівчат без урахування соматотипу та представниць різних соматотипів обхватні розміри тіла мають достовірно менші, або тенденції до менших значень (більш виражено в групах без урахування соматотипу та у екто-мезоморфів), а ширина дистальних епіфізів верхньої кінцівки, поперечний нижньогрудний та передньо-задній середньогруднинний діаметри – навпаки, достовірно більші, ніж відповідні показники практично здорових дівчат аналогічних груп. Крім того, у хворих дівчат без урахування соматотипу та представниць мезоморфного соматотипу ширина дистального епіфіза стегна достовірно менша, ніж у практично здорових дівчат аналогічних груп. Більші значення у хворих дівчат ширини дистальних епіфізів верхніх кінцівок на фоні менших значень ширини дистального епіфіза стегна є проявом «субпатологічного» конституціонального типу у дівчат, хворих на генітальний ендометріоз. При порівнянні обхватних розмірів тіла між хворими дівчатами різних соматотипів, в більшості випадків достовірно більші значення встановлені у представниць мезоморфного соматотипу; а при порівнянні поперечних розмірів – в більшості випадків достовірно менші значення встановлені у представниць екторморфного соматотипу.

Ключові слова: акушерство та гінекологія, генітальний ендометріоз, українські дівчата, антропометрія, обхватні та поперечні розміри тіла, соматотип.
