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PELVIOMETRIC PARAMETERS OF FEMALE PELVIS DEPENDING ON AGE

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ABSTRACT

Pelviometric studies of 36 female pelves of a narrow configuration (18 pelves with a uniformly constricted shape and 18 - with a transversely narrowed) were conducted. The change in the dimensional characteristics of these pelves was studied depending on age (age range 16-60 years). It was found that both groups of constricted pelvic forms were not characterized by high variability in the age aspect and their sizes were relatively stable throughout life. At the same time, it was found that the parameters of the transversely shaped forms of the pelves were more susceptible to changes than the dimensions of the uniformly constricted configurations.

1. Introduction

Currently, the problem of analyzing the size characteristics of narrow female pelvis remains in the focus of attention of researchers of various medical profiles. There is evidence [1] that a functionally narrow pelvis is found in every tenth parturient woman. Specialists in various fields of medicine indicate a significant increase in the risk of disability and morbidity in a child with an anatomically narrowed pelvis [2- 4], childbirth aggravated in such cases of perinatal pathology and early neonatal mortality is noted [5], [6]. However, despite the relevance, the age dynamics of the osteometric parameters of the female pelvis remains a poorly developed topic. Based on the analysis of literature data and having a sufficiently large osteological material, we set a goal to study the age-related morphodynamics of pelviometric signs of women in the range from 16 to 60 years.

2. Materials and Methods

The research material was the osteological collection from the museum of the department of Human Anatomy of the Azerbaijan Medical University (more than 100 preparations of mounted female pelvis preparations). The passport age of these objects, according to the museum register, ranged from 16 to 60 years and corresponded to the adolescent age period (16-21), as well as the I (22-35) and II (36-60) maturity periods. From this material were selected (using osteometric procedures) preparations that morphologically corresponded to narrow forms of the pelvis. Tazy with a transverse diameter of less than 11.8 cm. and the

transverse diameter of the exit of the pelvis less than 10.5 cm. were attributed to cross-contracted forms of the pelvis, according to the recommendations used in gynecology [7]. There were 18 such objects in the collection. In addition, the objects that had osteometric characteristics (true conjugate, diagonal conjugate, transverse diameter, ridge spacing, transverse size of the wide part, etc.) differing from the average downwards by 1.5 cm. and more were attributed to general uniformly constricted pelvic forms. The selection was carried out on the basis of a comparison of their sizes with the standards of average parameters, which are given by many authors as average values of pelviometric characteristics in women of the European race [8- 10]. As a result, the pelvis with a general uniform form also turned out to be 18. Preparations classified as narrow pelvic forms were distributed by age categories evenly and thus, in both groups, 6 objects corresponded to the adolescent age period, 6 - I period of maturity, and 6 - II period maturity. On each anatomical preparation of the bone pelvis, 15 pelviometric features were measured according to the generally accepted standard procedure [11]. A list of these signs is given in the tables below. The actual data collected using osteometric procedures were processed by simple methods of variation statistics [12]. The necessary statistical calculations were carried out using the appropriate Microsoft Excel software package.

3. RESULTS AND DISCUSSION

As a result of osteometric studies, corresponding pelviometric characteristics were obtained, which were recorded in special pelviometric blanks. These parameters were grouped and entered into the spreadsheet environment of Microsoft Excel. Then, for the entire studied osteological sampling, the corresponding variational-statistical parameters were calculated. Using the results obtained, it was necessary to clarify the behavior of pelviometric signs in the age dynamics taking into account the configuration features of the pelvis. That is, it was necessary to determine how the osteometric parameters of the female pelvis correlate with each other in three age categories with its transversely contracted and generally uniformly constricted configuration. As we already noted in the studied collection of pelvic preparations, the configuration of which was classified as transverse-contracted forms, there were a total of 18 objects. These pelvic preparations were characterized by small transverse dimensions. When objects were distributed from this population, 6 pelvic preparations were in each of the age groups under consideration. For transversely shaped pelvic forms, there was a large variation in metric indices. The most varying features were such signs as anatomical and true conjugates, the straight and transverse size of the wide part of the pelvis, as well as oblique diameter, the transverse size of the narrow part of the pelvis, the intercrest distance and the height of the pelvis. At the same time, the last four signs in different age periods differ by more than 1 cm, and the difference in the size of the pelvis height between the age groups of the first and second mature periods is more than 4 cm. Also, a sharp increase in parameters in the second mature period was characteristic of the transverse size of the narrow part pelvis and intercrest distance. However, all other metric indicators with this form of the pelvis change little with age. The transverse size of the inferior aperture of lesser pelvis, diagonal conjugate, the straight size of narrow part of pelvis and transverse diameter had the most stable dimensional characteristics.

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