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Editorial

Studying the Anatomy of the Bones of the Female Pelvis is an Important Aspect of Work in Obstetric Practice

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Introduction

Knowledge of the anatomical dimensions of the pelvic bones, in addition to anatomy, is very important, primarily in obstetrics, forensic medicine and even in paleontology and archeology! In obstetrics, the weight of the fetus and the size of the pelvis of a pregnant woman are two inseparable concepts. The structure and size of the pelvis are crucial for the course and outcome of childbirth. Deviations in the structure of the pelvis, especially a decrease in its size, complicate the course of labor or present insurmountable obstacles to it.

In obstetric practice, the examination plan for a pregnant woman before future births necessarily includes measuring the pelvis. This procedure is often performed at the first visit to every woman who contacts an obstetrician-gynecologist in connection with the onset of a desired pregnancy. The bony pelvis and the soft tissues lining it constitute the birth canal through which the baby is born. The doctor and his patient need to know whether the birth canal is too small for the child being born. This circumstance determines the possibility of childbirth through the natural birth canal. The results of the pelvic examination are included in the medical records. So that you can figure out for yourself what is written on your exchange card, we will tell you in detail what the doctor does when measuring a pregnant woman's pelvis.

The pelvis is examined by inspection, palpation and measurement. Determining the size of the pelvis is extremely important, since their decrease or increase can lead to significant disruption of the course of labor. The most important during childbirth are the dimensions of the small pelvis, which are judged by measuring certain dimensions of the large pelvis using a special instrument - a pelvis gauge. The size of the large pelvis is determined using a Martin pelvis gauge (Figure 1).

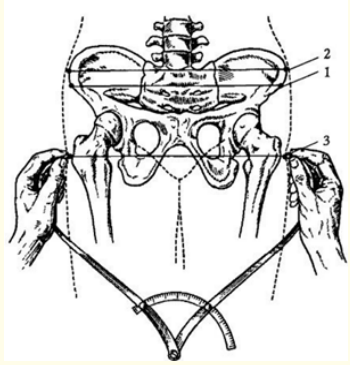

Figure 1: Measuring the external dimensions of the bony pelvis using a pelvis meter (Martin calipers).

The pelvis meter has the shape of a compass equipped with a scale on which centimeter and half-centimeter divisions are marked; there are buttons at the ends of the pelvis meter branches; they are applied to the places, the distance between which is to be measured, the external values described below are measured, by which the size and shape of the small pelvis are approximately judged.

What bones and joints does the female pelvis consist of? It consists of: the sacrum (os sacrum), the coccyx (os coccygis) and two pelvic or nameless bones (os coxae s. innominatae). The pelvic bones are attached to the sacrum via the sacroiliac synchondrosis and to each other via the pubic symphysis. The transverse dimensions of the pelvis (distantia spinarum, distantia cristarum,

distantia trochanterica) and the external conjugata of the pelvis - conjugata externa (Figure 1) are measured.

- Distantia spinarum - the distance between the anterosuperior iliac spines on both sides; this size is 25-26 cm.
- Distantia cristarum - the distance between the most distant parts of the iliac crests, this size is 28-29 cm.
- Distantia trochanterica - the distance between the greater trochanters of the femurs; this distance is 31-32 cm. In a normally developed pelvis, the difference between the transverse dimensions of the large pelvis is 3 cm. A smaller difference between these dimensions will indicate a deviation from the normal structure of the pelvis.
- Conjugata externa - the distance between the middle of the upper outer edge of the symphysis and the articulation of the V lumbar and I sacral vertebrae.

The external conjugate is normally 20-21 cm.

The external conjugate is important - by its size one can judge the size of the true conjugate (the direct size of the entrance to the pelvis). To determine the true conjugate, subtract 9 cm from the length of the outer conjugate. For example, if the outer conjugate is 20 cm, then the true one is 11 cm.

The difference between the external and true conjugate depends on the thickness of the bones (sacrum, symphysis) and soft tissues. To determine the thickness of a woman's bones, measure the circumference of the wrist joint (Soloviev index) with a centimeter tape. Its average value is 14 - 16 cm. With the Solovyov index less than 14 cm (thin bones), the difference between the external and true conjugate will be less, so 8 cm is subtracted from the external conjugate. With the Solovyov index greater than 16 cm (thick bones), the difference between the outer and true conjugate will be larger, so 10 cm is subtracted from it.

Conclusions

Knowledge of human anatomy is a very important aspect of medical practice and, in particular, in practical obstetrics. Knowledge of anatomical indicators and the external dimensions of the female bony pelvis helps obstetricians successfully conduct childbirth with their patients!