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## Transvaginal ultrasound characteristics of the uterus and ovaries in young women with polycystic ovaries

**Abdullaiev R Ya**

Kharkiv Medical Academy of Postgraduate Education, Ukraine

**Aim:** The aim of the study was the echo graphic semiotics of PCOS in young women in a transvaginal triplex mode.

**Materials and Methods:** The study included the results of transvaginal ultrasound examination 193 female with menstrual irregularities, aged 18–27 years were recruited in the study. Transvaginal echography (TVE) was performed on the 4<sup>th</sup>-6<sup>th</sup> and 8<sup>th</sup>-10<sup>th</sup> days of the menstrual cycle, and in the absence of menstruation on any day. All women had the ultrasound criteria of PCO: the presence of 12 or more 2-9mm ovarian follicles and ovarian volume of more than 10cm<sup>3</sup>. Considering the distribution of follicles in the ovaries and their volume, the blood flow in the stroma, the level of anti-mueller hormone, the ratio luteinizing and follicle-stimulating hormones (LH/FSH), polycystic ovary syndrome (PCOS) was diagnosed in 139 (72.0%) women, multifollicular ovaries (MFO) in 54 (28.0%) women.

**Results:** Peripheral location of ovaries in women with PCOS was noted in 78 (56.1±4.2%) cases, mixed in 61 (43.9±4.2%) cases ( $P<0.05$ ), in patients with MFO in 23 (42.6±6.7%) and in 31 (57.4±6.7%) cases, and among the fertility healthy women in 27 (79.4±6.9%) and in 7 (20.6 ± 6.9%) cases respectively ( $P<0.001$ ). An enhanced in stromal echogenicity was noted in 74 (53.2±4.2%) of women with PCOS, in 17 (31.5±6.3%) women with MFO ( $P<0.01$ ). The number of follicles within the limits of 13-15 was registered in 64 (46.0±4.2%) of women with PCOS, 38 (70.4±6.2%) of women with MFO ( $P<0.001$ ), and more than 15 follicles - in 75 (54.0±4.2%) and in 15 (27.8±6.1%) women ( $P<0.001$ ), respectively. In the group of PCOS, the average volume of the ovaries was 18.1±3.8cm<sup>3</sup>, in the group of MFO-12.3±2.8cm<sup>3</sup>, respectively. There were no statistically significant differences in the volumes between these groups. However, in both groups, the volume of the ovaries was significantly ( $P<0.01$ ) higher than the parameters of the control group. The vascularization of the ovary stroma in the patients with PCOS was significantly more than in the MFO. The average value of  $V_{max}$  in the group of PCOS was 49.1±8.6cm/s, in the group of MFO-35.6±7.1cm/s, in fertility healthy women - 18.9±4.6cm/s, respectively ( $P<0.001$  and  $P<0.05$ ). Parameters of resistances index (RI) in these groups were 0.48±0.03; 0.54±0.03 and 0.54±0.03, respectively ( $P<0.05$ ). The average length of the cervix in the group of women with PCOS was 43.7±3.6mm, in the group with MFJA - 34.1±3.2mm, in healthy women - 28.6±2.9mm, respectively. The average uterine body length in the group of women with PCOS was 43.7±3.6mm, in the group with MFJA - 34.1±3.2mm, in healthy women - 28.6±2.9mm, respectively. The ratio of the length of the cervix and the body of the uterus was 1.12±0.07; 0.92±0.06 and - 0.69±0.05, respectively.

**Conclusion:** (a) Mixed type distribution of follicles, their number is more than 15 on the echo graphic section, the volume of the ovary is more than 14 cm<sup>3</sup>, an increase in the number of color vascular signals, an increase in the maximum systolic velocity of more than 50 cm/s, a decrease in peripheral resistance to blood flow of fewer than 0.51 increases the reliability of ultrasound PCOS criteria. (b) In the syndrome of polycystic ovaries, uterine hypoplasia is observed, which is manifested by an increase in the length of the cervix and an increase in the ratio of the length of the cervix and the body of the uterus.

### Biography

Abdullaiev R Ya is currently working in the Kharkiv National Medical University Ukraine. He has published numerous research papers and articles in reputed journals and has various other achievements in the related studies. He has extended his valuable service towards the scientific community with his extensive research work.

### Notes:

r.abdullaiev@bk.ru