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Ultrasound Assessment of the Uterus and Ovary: Perimenopausal vs. Early Postmenopausal Women

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Aim. To assess the normal values for perimenopausal uterine volume, endometrial and myometrial thickness and ovarian volume. We postulated that those values were not significantly different when compared with early postmenopausal women. Uterine blood flow and intraovarian perfusion were also compared.

Subjects and Methods. Sixty five women (30 perimenopausal women and 35 early postmenopausal) were examined by transvaginal ultrasonography and color Doppler ultrasonography. Entry criteria for this study was visualization of the uterus and both ovaries on a B-mode ultrasound. Visualization of the blood flow varied. In all women, the uterine volume, full thickness of endometrium and half thickness of myometrium, ovarian volumes, and uterine blood flow were measured.

Results. The mean uterine volume in perimenopausal women was 44.35 cm³, and 40.81 cm³ in postmenopausal women. The full endometrial thickness was 0.36 cm in perimenopausal, and 0.31 cm in postmenopausal women. One half of myometrial thickness was 1.23 cm in perimenopausal women, and 1.16 cm in postmenopausal women. In the group of perimenopausal women, the mean Resistance Index (RI) in the left uterine artery was 0.82, and in the right uterine artery 0.84. The same measurements in the group of postmenopausal women were 0.82 and 0.86, respectively. The mean left ovarian volume was 1.99 cm³ in perimenopausal, and 1.89 cm³ in postmenopausal group. The right ovarian volume was 1.73 cm³ in perimenopausal women, and 1.88 cm³ in postmenopausal women. Intraovarian blood flow was detected in some perimenopausal ovaries (in 4 left ovaries and 2 right ovaries). RI was in all cases 0.60. Intraovarian blood flow was not visualized in any of postmenopausal ovaries ($p < 0.05$).

Conclusion. Ultrasound evaluation of the perimenopausal uterus and ovaries did not show significant difference when compared to early postmenopause. This may imply that current protocols for annual exams, hormonal replacement therapy and pelvic cancer screening may be safely applied to perimenopausal women as well. Our results may help in managing the perimenopausal women.

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