

MORPHOLOGICAL AND MORPHOMETRIC CHANGES IN THE ENDOMETRIUM AND MYOMETRIUM OF THE UTERUS DURING PUBERTY**Xojanazarova Saulekhan Jubatirovna**

associate professor, Tashkent State Medical University

Akhmedov Bakhtiyor Elmurodovich

Department of Clinical Anatomy of Karshi State University

Umatalieva Sevara Abdurasul kizi

student, 2 - Faculty of Medicine, Tashkent State Medical University

(Tashkent, Uzbekistan)

Abstract: Uterine diseases are very common among women on earth, but the percentage varies depending on the specific type of disease, age group, and region. According to WHO data: Fibromyoma (uterine fibroids) – occurs in about 20-40% of women at reproductive age, endometriosis – is detected in 10-15% of women, and in infertile women it can be up to 30-50%. Also, inflammatory diseases of the lining of the uterus (endometritis, salpingitis) – occur in 5-10% of total women, but more often in women of reproductive age, uterine cancer – relatively less, in 1-2% of women develop throughout life, but differ depending on age and area. However, in developed countries, where prevention and diagnosis are good, some diseases are quickly detected and treated, while in developing countries, high rates may be observed.

Key words: uterus, endometrium, myometrium, women, morphological features.

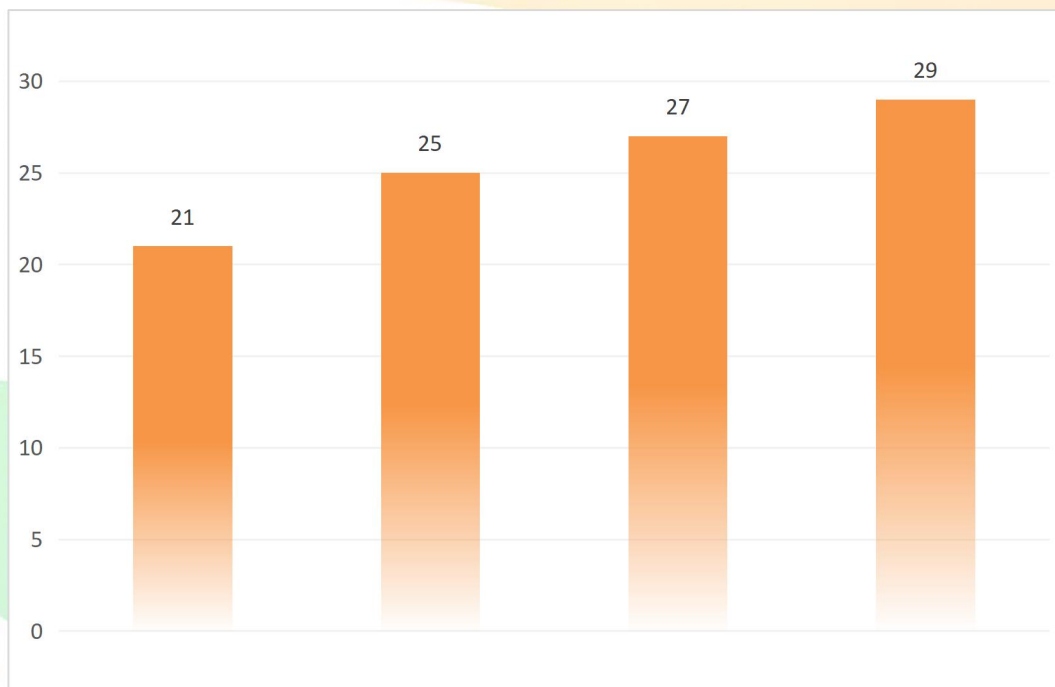
Introduction. The development and functional activity of the uterus is one of the main indicators of health in women of reproductive age. The endometrial layer is relatively thin during puberty, and its main elements are stromal cells and rudimentary glands. During this period, endometrial hyperplasia and glandular development gradually occur. During puberty, the endometrium reaches its maximum size and is divided into functional and basal layers; the number and activity of glands increase, and the vascular network develops. During puberty, the endometrium reaches its maximum size and is divided into functional and basal layers; the number and activity of glands increase, and the vascular network develops.

The purpose of the study: Study of morphological and morphometric changes in the endometrium and myometrium of the uterus during puberty.

Research materials and methods: The myometrium is relatively thin and poorly developed in muscle tissue during puberty, but in adulthood, the density of muscle cells increases in the central and peripheral parts, which increases the contractile and functional capabilities of the uterus. Morphometric analysis suggests that the endometrial floor grows to 2-3 mm during puberty and 6-12 mm during maturity, while the myometrial floor extends from 5-8 mm to 10-15 mm, respectively. At

the same time, the ratio of stromal and glandular components also changes with age, which forms the morphological basis for preparation for reproductive activity. These changes serve as an important diagnostic indicator in assessing the physiological function and reproductive capabilities of the uterus, as well as the basis for the identification of pathological conditions (for example, hypoplasia, endometrial dysplasia) and the development of strategies for their treatment.

Research materials and methods: During the first period (puberty) and the period of maturity (reproductive age), morphological and morphometric changes occur in the uterine layers—the endometrium and myometrium. The endometrial layer is relatively thin during puberty, and its main elements are stromal cells and rudimentary glands. During this period, endometrial hyperplasia and glandular development gradually occur. During puberty, the endometrium reaches its maximum size and is divided into functional and basal layers; the number and activity of glands increase, and the vascular network develops.



In the endometrial layer: during the maturation period, a slight thickening of the functional layer may be observed. The stroma density decreases and immunological cells increase. In the myometrium, smooth muscle fibers undergo slight hypertrophy, the amount of collagen increases, and elastic fibers decrease. This may affect the contractile properties of the uterus.

Conclusion: Morphometrically: the endometrial stroma:gland ratio and the thickness of the myometrial fibers change with age. These changes can significantly affect reproductive function and pregnancy safety. This serves to prevent and treat diseases.

Referens

1. Артеменко Ю. С. и др. Генетические маркеры ожирения и связанных с ним репродуктивных осложнений: современное состояние проблемы //Акушерство и гинекология: Новости. Мнения. Обучения. – 2021. – Т. 9. – №. Приложение 3 (33). – С. 48-55.
2. Арутюнян Н. А. и др. Иммуногистохимические особенности эндометрия у женщин различных возрастных групп с бесплодием и гиперпластическими процессами в эндометрии //Российский вестник акушера-гинеколога. – 2015. – Т. 15. – №. 3. – С. 15-19.
3. Бабанов С. А. и др. Производственные факторы и репродуктивное здоровье: каузация и оценка профессиональных рисков //Гинекология. – 2019. – Т. 21. – №. 4. – С. 33-43.
4. Белов А. И. Анализ сочетания полипа матки с патологией эндометрия у женщин разных возрастных групп //Научные достижения и открытия современной молодёжи. – 2018. – С. 201-204.
5. Белов А. И., Пономарева Н. А. Факторы риска развития полипов эндометрия у женщин разных возрастных групп //Молодежь-практическому здравоохранению. – 2019. – С. 23-28.
6. Брюханова А. И., Зямиллева Э. Н. Патоморфологические особенности гиперплазии эндометрия у женщин юга Тюменской области //Неделя молодежной науки. - 2020. – С. 370-371.
7. Веропотвелян П. Н. и др. Особенности гиперплазии эндометрия в разные возрастные периоды //Мед. аспекты здоровья женщины. – 2017. – Т. 1. – С. 54-62.
8. Гейвандова Э. С. Диагностическая ценность исследования морфологии менструальных выделений в гинекологической практике //Новая наука: стратегии и векторы развития. – 2017. – Т. 3. – №. 4. – С. 25-30.
9. Григорьева Ю. В. и др. Сравнительные морфологические аспекты становления миометрия рогов и шейки матки крыс в постнатальном онтогенезе //Вестник новых медицинских технологий. – 2018. – Т. 25. – №. 4. – С. 164-169.
10. Гришкина А. А. и др. Морфологические изменения и особенности экспрессии факторов апоптоза в эндометрии женщин с бесплодием, обусловленным эндометриозом //Современные проблемы науки и образования. – 2019. – №. 5. – С. 115-115.
11. Джилавян Г. А., Тограмаджян А. А., Нерсоян А. А. Особенности клинического течения гиперпластических процессов эндометрия в разных возрастных группах. – 2025. – С.110-119
12. Диндяев С. В. и др. Функциональная морфология биоаминового обеспечения матки //Морфология в теории и практике. – 2017. – С. 147-150.
13. Дьяконов С. А. Метаболический синдром и репродуктивная система женщин (обзор литературы) //Problemy Reproduktsii. – 2016. – Т. 22. – №. 2. – С. 12-22.
14. Елгина С. И., Перегудова А. А. Гиперплазия эндометрия у женщин репродуктивного возраста. современный взгляд на проблему //Мать и дитя в Кузбассе. – 2025. – №. 3 (102). – С. 29-36.
15. Зотова О. А., Шакирова Е. А. Ожирение и метаболический синдром в практике врача акушера-гинеколога //Фундаментальная и клиническая медицина. – 2017. – Т. 2. – №. 3. – С. 70-75.