Endometrial Hyperplasia

Endometrial hyperplasia occurs from estrogen hyperstimulation. Histologically, it is classified with or without nuclear and cellular atypia. Clinical features include postmenopausal vaginal bleeding, amenorrhea, menorrhagia, metrorrhagia, and short menstrual cycles. Diagnosis begins with transvaginal ultrasound and may be followed with endometrial biopsy if ultrasound results are suspicious. Treatment include progresterone to avoid progression to endometrial carcinoma. Please see the Picmonics on Endometrial Carcinoma for more information.



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Characteristics

Unopposed Estrogen

Up-arrow Estrogen-eggs

Estrogen promotes growth of the endometrium in the uterus. As long as estrogen dominates in the menstrual cycle, endometrial growth will continue during the proliferative phase of the endometrial cycle and the endometrium will not shed. Several etiologies result in unopposed estrogen including anovulatory cycles, PCOS, estrogen-secreting tumors, and hormone replacement therapy.

With or Without Atypia

A-Tipi

Endometrial hyperplasia can be with or without atypia. Atypia describes abnormal cells that can lead to tumor growth or cancer. Hyperplasia without atypia means there are no abnormal cells present.

Signs and Symptoms

Postmenopausal Vaginal Bleeding

Elderly-woman with Vaginal Bleeding

Any bleeding in postmenopausal women should be alarming and warrants a transvaginal ultrasound. This is because bleeding can be a sign of underlying endometrial hyperplasia or carcinoma.

Amenorrhea

Amen-tampon

Amenorrhea is due to anovulation, which refers to irregular or absent menses from lack of progesterone to stabilize the uterine lining. During anovulation, there is never progression to the luteal phase of the menstrual cycle. This can be due to endocrine conditions like polycystic ovarian syndrome, pituitary disorders, hyperprolactinemia, or other hormonal imbalances. This unopposed estrogen allows proliferation of the endometrium.

Menorrhagia

Very bloody Tampon-with-rags

Menorrhagia is heavy menstrual bleeding. Estrogen stimulates the endometrium during the proliferative phase of the endometrial cycle causing the endometrium to grow thick, which is endometrial hyperplasia. This increased thickness leads to more endometrium shedding during menstruation and consequently bleeding.

Metrorrhagia

Metro-tampon

Metrorrhagia is bleeding between menses. Estrogen stimulates the endometrium during the proliferative phase of the endometrial cycle causing the endometrium to grow thick, which is endometrial hyperplasia. This thick endometrium often leads to breakthrough bleeding, which help explains why women who do not ovulate still can have bleeding.

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Short Menstrual Cycles

Tampon in Shorts

To assess the length of a menstrual cycle, start counting on the first day of the previous menstruation or bleed to the first day of the next menstruation. Short menstrual cycles allows the endometrium to be exposed to more estrogen possibily leading to endometrial hyperplasia.

Diagnosis

Transvaginal Ultrasound

Ultrasound-machine

Diagnosis of endometrial hyperplasia begins with transvaginal ultrasound (TVUS). If the endometrium thickness is >4mm, further tissue sampling is needed with endometrial biopsy may be required.

Treatment

Progesterone

Pregnant-jester

Progestin therapy stabilizes the endometrial lining and controls the abnormal endometrium growth. Progestin therapy can include progestin IUDs, progestin-only pills, or injections.

Complications

Endometrial Carcinoma

Endometrium Car-gnome

This is cancer of the endometrium most commonly due to unopposed estrogen and the natural progression of uncontrolled endometrial hyperplasia. Long-term unnopposed estrogen allows the uterine lining to proliferate. This cancer is most commonly seen in postmenopausal women.

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