progesterone  (proe-jess-te-rone)

Classification: Hormones
Pharmacologic: progestins

Pregnancy Category D

Indications
Secondary amenorrhea and abnormal uterine bleeding due to hormonal imbalance.

Prometrium: Progesterone is secreted in the urine on a regular basis in postmenopausal women who have not had a hysterectomy (with estrogen). Part of assisted reproductive technology (ART) in the management of infertility (10% and 8% gel/applicator).


Action

Pharmacokinetics
Absorption: Micronization increases oral and vaginal absorption.

Distribution: Enters breast milk.

Protein Binding: 90%.

Metabolism and Excretion: Metabolized by the liver; 50–60% eliminated by the kidneys; 10% eliminated in feces. Half-life: Several minutes.

TIME/ACTION PROFILE (blood levels)

<table>
<thead>
<tr>
<th>ROUTE</th>
<th>ONSET</th>
<th>PEAK</th>
<th>DURATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PO</td>
<td>unknown</td>
<td>2–4 hr</td>
<td>unknown</td>
</tr>
<tr>
<td>Vag</td>
<td>unknown</td>
<td>34.8–55 hr</td>
<td>unknown</td>
</tr>
<tr>
<td>IM</td>
<td>unknown</td>
<td>19.6–28 hr</td>
<td>unknown</td>
</tr>
</tbody>
</table>

Contraindications/Precautions
Contraindicated in: Hypersensitivity; Hypersensitivity to paraben or sorbate of above 0.01% (gel suspension only); Hypersensitivity to patients (Prometrium only); Thromboembolic disease; Cerebrovascular disease; Severe liver disease; Renal or genital cancer; Porphyria; Mesenteric artery; CMI: Contraindicated except in corpus luteum dysfunction.

Use Cautiously in: History of liver disease; Renal disease; Cardiovascular disease, Seizure disorders, Mental depression.

Adverse Reactions/Side Effects
CNS: depression.

EENT: retinal thrombosis.


Interactions
Drug-Drug: May effect effectiveness of bromocriptine when used concurrently for galactorrhea and amenorrhea.

Route/Dosage
PO (Adults): Secondary amenorrhea—400 mg once daily in the evening for 10 days; prevention of postmenopausal endometrial hyperplasia—200 mg once daily at bedtime for 10 days in 12- to 20-day cycle or on days 25–30 of a 30-day cycle, if patient currently receives less than 25 mg/day of estrogen, then a daily dose of 300 mg of progesterone or 100 mg/day after breakfast and 200 mg at bedtime is used; further adjustments may be required.

Vag (Adults): Secondary amenorrhea—45 mg (1 applicatorful of 4% gel) once every other day for up to 6 doses; Corpus luteum insufficiency or assisted reproduction technology—For luteal phase support: 90 mg (1 applicatorful of 8% gel) once daily for 24 hr after embryo transfer and continued through day 30 post-transfer (if pregnancy occurs, treatment may be continued for up to 10–12 wk). Partial or complete ovarian failure—90 mg (1 applicatorful of 8% gel) twice daily while undergoing donor egg recipient cycle (if pregnancy occurs, treatment may be continued for up to 10–12 wk).

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Support of embryo implantation and early pregnancy—

100 mg insert 2 or 3 times daily for up to 10 wk.

IM (Adults):

Secondary amenorrhea—100–150 mg (single dose) or 5–10 mg daily for 6–8 days given 8–10 days before expected menstrual period.

Dysfunctional uterine bleeding—5–10 mg daily for 6 days.

Corpus luteum insufficiency—12.5 mg/day at onset of ovulation for 2 wk; may continue until 11th wk of gestation (unlabeled).

NURSING IMPLICATIONS

Assessment

● BP be monitored periodically during therapy.

● Monitor intake and output ratios and weekly weight. Report significant discrepancies or steady weight gain.

● Amenorrhea: Assess patient’s usual menstrual history. Administration of drug usually begins 8–10 days before anticipated menstruation. Withdrawal bleeding usually occurs 48–72 hr after last dose of therapy. Therapy should be discontinued if menses occur during injection series.

● Dysfunctional Bleeding: Monitor pattern and amount of vaginal bleeding (pad count). Bleeding should end by sixth day of therapy. Therapy should be discontinued if menses occur during injection series.

● Lab Test Considerations: Monitor hepatic function before and periodically during therapy.

Patient/Family Teaching

● Advise patient to report signs and symptoms of fluid retention (swelling of ankles and feet, weight gain), thromboembolic disorders (pain, swelling in extremities, localized chest pain, blurred vision), mental depression, or hepatic dysfunction (yellowing of skin or eyes, pruritus, dark urine, light-colored stools) to health care professional.

● Instruct patient to notify health care professional if pregnancy is suspected.

● Monitor patient for sun sensitivity and protect skin from exposure to ultraviolet light.

● Advise patient to notify health care professional of medication regimen before treatment or surgery.

● Emphasize the importance of routine follow-up physical exams, including BP, breast examination, and pelvic examination; and Pap smears.

● Instruct patient not to use vaginal gel concurrently with other vaginal agents if these agents must be used concurrently, administer at least 6 hr before or after vaginal gel. Small, white globules may appear as a vaginal discharge possibly due to gel accumulation, even several days after use.

● Development of normal cyclic menses.

● Successful outcome in assisted reproduction.