ABNORMAL UTERINE BLEEDING

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Control of Normal Menstruation

(I) Vascular Theory:

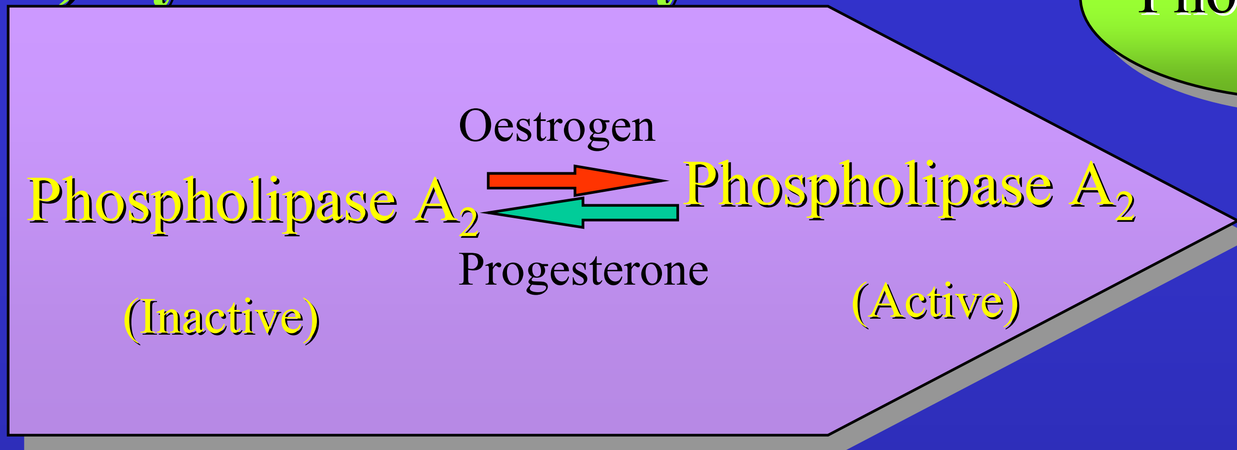
Degeneration of corpus luteum → - - Oestrogen & progesterone → - - Stromal Oedema → Shrinkage of endometrium → + + Coiling of spiral arteriols → Ischaemia & necrosis of superficial & middle layer of endometrium.

(II) Prostaglandin Theory:

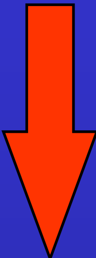
PG F2a → V.C:&
Myometrial contraction
Thromboxane → V.C. &
aggregation of platelets

PG E_2 → V.D.
Prostacycline → V.D. &
- - aggregation of platelets

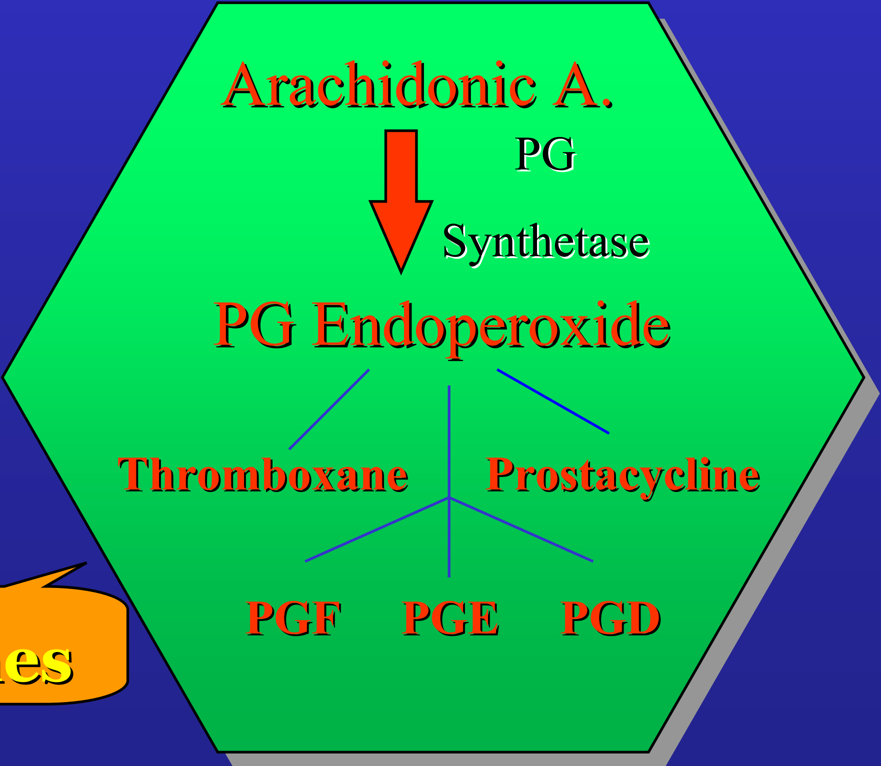
(III) Lysosomal Theory:



Phospholipids



Lysosomes



Microsomes

(IV) Tissue Regeneration Theory:

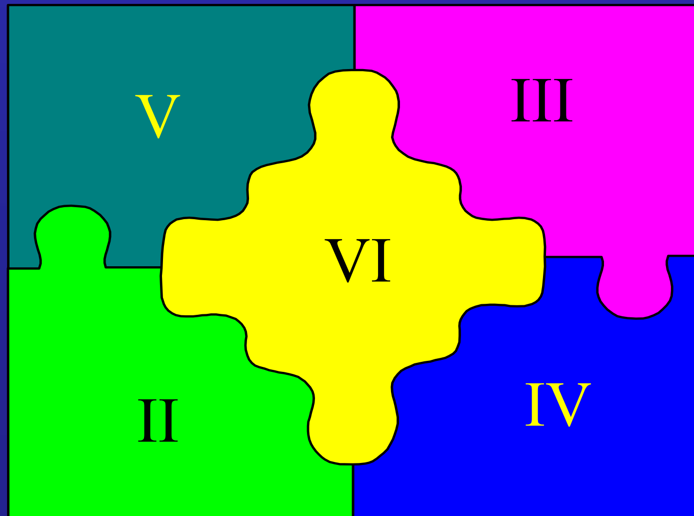
Regeneration of endomerium starts within 48h of flow.

(V) Relaxin Theory:

Relaxin causes hypertrophy of endothelium of basal & spiral arterioles → - - blood loss.

(VI) Haemostatic Theory:

+ + Fibrinolotic Activity of endometrium → + + bleeding.



Clinical Varieties of Abnormal Uterine Bleeding

Term	Description
Polymenorrhea	Frequent, length of cycle less than 21 days
Menorrhagia	Excessive, blood loss more than 80 ml
Hypermenorrhea	Prolonged, more than 7 days
Metrorrhagia	Irregular uterine bleeding not related to menses
Menometrorrhagia	Irregular& excessive bleeding ( ) menses
Oligomenorrhea	Infrequent, length of cycl more than 35 days
Hypomenorrhea	Scanty, less than 2 days of bleeding

Constitutional or

Pathological

Aetiology of Abnormal Uterine Bleeding

General Causes

1. Hypertension
2. Cong. Ht. failure
3. Blood diseases
4. Hypo-hyperthyroidism
5. Anticoagulant therapy
6. Liver diseases
7. Psychological upsets
8. Severe anaemia
9. Hormonal as anovulation & E2 therapy

Local Causes

1. Chronic pelvic infection
2. Pregnancy complication
3. Benign & malignant genital tumors
4. Endometriosis
5. RVF & Prolapse
6. IUCD
7. Simple congestion

Dysfunctional

No Organic lesions i.e. tumors, inflammation, or pregnancy

Classification of Abnormal Uterine Bleeding

Type	Causes
Newborn bleeding	Estrogen obtained from mother
Childhood bleeding	- Precocious puberty. - F.B. in vagina. - Grape-like sarcoma of cervix or vagina.
Adolescent bleeding (< 20 years)	Dysfunctional
Adult (childbearing period) bleeding (20-40 years)	- Benign tumors. - PID. - Complications of pregnancy.
Perimenopausal bleeding(> 40 years)	- Endometrial hyperplasia. - Benign tumors. - Malignant tumors of CX. orendometrium. - Dysfunctional.
Postmenopausal bleeding(>6m)	Malignant in 25% of cases.

Etiology of Postmenopausal Bleeding

General Causes

1. HRT (25%)
2. Bl. diseases
3. Anticoagulants
4. Hypertension

Local Causes

1.Vulva:

- Malignant T. - Fissured dystrophies.
- Urethral carancle. - Direct trauma.

2. Vagina:

- Malignant T. - Senile vaginitis.
- Trophic ulcers. -Retained pessary or F.B.

3. Cervix: - Malignant T. - Erosion. - Ulcers.

4. Uterus: - Malignant T. - Endometrial hyperplasia (HRT or E ov. T.)
 - Fibroid+malignant ch. or necrosis. - Senile endom. - T.B. endom.

5. Tube: - Malignant T.

6. Ovary: - Malignant T.+ut. metast. - Functioning ov. T. - E ov. T.+endom. C

No Cause (15%)

Dysfunctional Uterine Bleeding

Definition:

Abn. ut. bleed. without organic lesions e.g. tumor, inflammation or pregnancy.

Classification

Primary:

dysf. in GT, pituitary, hypothalamus or higher centers.

Secondary:

dysf. in organ or system outside GT e.g. thyroid.

Iatrogenic:

sex hormones or contraception.

Ovulatory:

Non-ovulatory:

e.g. PCO

Corpus luteum abn.

(i) Insufficiency

« irregular ripening» ....hypermen.,polymen., PM spotting.

(ii) Prolonged activity

«irregular shedding» .... hypermen., menorrhagia.

1. Cyclic or regular: menorragia & polymenorrhia.

2. Acyclic or irregular:

metrorrhagia.

Diagnosis of Abnormal Uterine Bleeding

(I) History:

Personal: age, marrital state, parity.

Present: amount, character, duration, associated symptoms, UT or GIT symp., emotional.

Menstrual: periods of amenorrhea

Past: Medical, hormonal, surgical.

Obstetric: DUB in purperium, choriocarcinoma.

Family: Endometrial carcinoma.

(II) Examionation

General: anaemia, cachexia, chest & Ht., bl. press., thyroid.

Abdominal: pelviabdominal mass, pregnancy, ascitis.

Local:

vulva, urethra, anal canal, vagina, CX., uterus, adnexae.

(III) Investigations

1. D&C biopsy:
2. Hematological:

-Hb% - Bl. Cl. time

- Platelet C. - Tournique T.

3. Vaginal smear:
4. Endocrinal:

Thyroid and adrenal

5. Hysteroscopy: polyp, malformations, myomas, remnants of conception, endometrial C.
6. Laparoscopy: ov.&tubal mass, endometriosis, PID, ectopic.
7. U/S: pelvic mass.

Treatment of Abnormal Uterine Bleeding

General

- Anaemia
- Bl. transf.

Cause

- Hypertension
- Bl.diseases.
- Thyroid dis.
- Polypectomy myomectomy.

Medical

1. NSAD:

- e.g. Ibuprofen (200-400 mg), Naproxen (250 mg), mefenamic acid (250-500 mg). t.d.s during bleeding only.
- nausea, vomiting, diarrhea.

2. Antifibrinolytic Agents:

Tranexamic acid (cyclokapron), 1gm/4h for 3 days then - - (22 gm/period).

3. Ethamsylate (Dicynone):

- - - capillary fragility, has anti-PG & antihyaluronidase effect.
- 500 mg/6h starting 5 d before menses for 10 d.

Hormonal

1.Oral contraceptives:

- Hypoplasia & anti-PG in endometrium. 1- 4 pills/d.. bleeding stopped ...1 pill (21 d). - Nausea & vomiting.

2. Progestogens:

- Opposes action of estrogen on endometrium
- Norethisterone (Primulot-N) or norethisterone acetate (Primulot-Nor) 2 x 5 mg/d. up to 30mg/d.

3. Danazol:

- Isoxazole derivative of 17 - ethinyltestosterone . 400 mg/d.
- Atrophy of endometrium systematically by - - Gn secretion & ov. steroidogenesis, locally - - E & progesterone receptors.
- Expensive & side effects e.g. acne, weight gain and hirsutism.

4. LHRH analogues:

- Inhibit Gn secretion from pituitary. 200 - 400 microgram nasal spray / d.
- Quite expensive.

Surgical

(I) Conservative Surgery:

Endometrial ablation or resection using diathermy, thermal (ballon, microwave ..etc.) or laser.

N.B. Uterine curettage has a good diagnostic but short-term therapeutic value.

(II) Hysterectomy:

1. Failure of previous lines of treatment.

2. Associated pelvic lesions as fibroidor malignancy.

3. Peri- and post menopausal bleeding usually treated by hysterectomy.