

# Oligoohypomenorrhe

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**BY**

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# Definitions:

## Primary amenorrhea:

Failure of menarche to occur by the 16 years with the presence of 2ry sexual characters or by the age of 14 years with absence of 2ry sexual characters.

## Secondary Amenorrhea:

Cessation of menses for a period of 6 months or summation of 3 consecutive cycles in a woman who previously had initiation of menses

# Definitions:

The etiology & diagnostic evaluation between primary and secondary amenorrhea is generally the same. However:

**\*\*primary amenorrhea carries a worse prognosis as it may be caused by a faulty development of the genital system.**

**\*\*certain conditions are causes of secondary not primary amenorrhea e.g. Sheehan's or Ashermann's syndromes.**

# Definitions:

## Oligomenorrhea:

Infrequent menstruations occurring at cycles longer than 35 days or longer than the usual habit of the woman.

## Hypomenorrhea:

When the periods are shorter in duration or smaller in amount relative to the usual habit of the woman.

**\*\*Oligomenorrhea & hypomenorrhea have similar causes to amenorrhea but the difference is in the degree.**

**Pituitary**

**Hypothalamus**

**FSH**

**LH**

**Fallopian Tube**

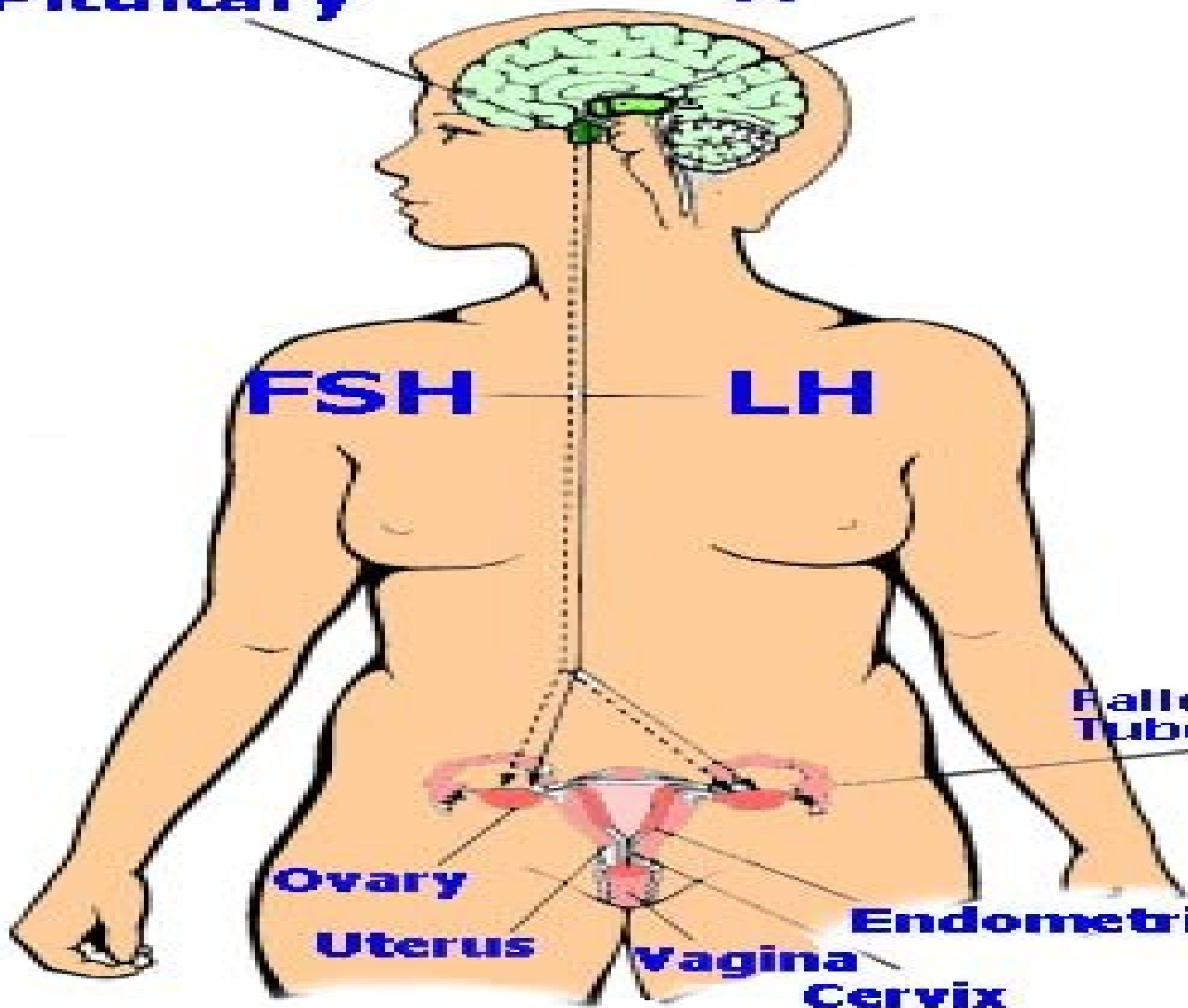
**Ovary**

**Uterus**

**Vagina**

**Endometrium**

**Cervix**



# Etiology:

**\*\*Hypothalamic amenorrhea (hypogonadotropic hypogonadism):**

**\*\*Pituitary amenorrhea**

**\*\*Ovarian amenorrhea**

**\*\*Uterine amenorrhea**

**\*\*Cryptomenorrhea**

# Hypothalamic amenorrhea

\*\* GnRH pulses → LH & FSH → estradiol

\*\* Usually associated with other hypothalamic dysfunctions such as overeating, undereating, obesity, and weight loss.

## Clinical types:

-- Anorexia nervosa & Bulimia

-- Ballet dancer amenorrhea

-- Cerebral cortex effects (emotional upsets, psychosis, pseudocystis)

-- Effect of drugs (tricyclic anti depressants, reserpine, phenothiazine derivatives, COCs)

-- Kallman's syndrome

# Hypothalamic amenorrhea

## Anorexia nervosa:

\*\*usually occurs in young & mid age, there is pathological desire to not gaining weight, fear of eating, extreme emaciation with denial of undereating with or without breast development.

\*\*genital tract atrophy & flat ovaries on US

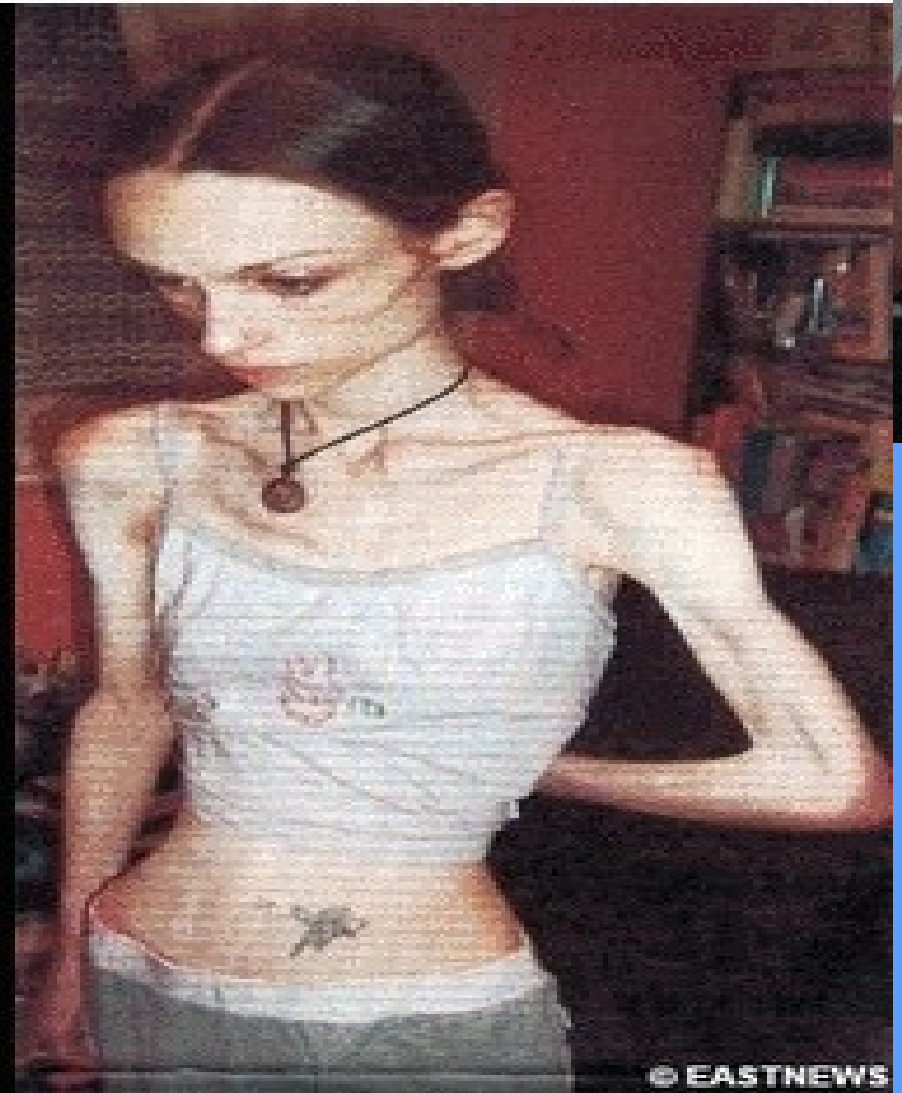
\*\*no bleeding on progestagen withdrawal

\*\*GNRH injection stimulates the pituitary FSH & LH and the ovaries are responsive to gonadotrophins

\*\*if not treated it may be fatal

Hypothalamic amenorrhea

Anorexia nervosa



# Ballet dancer amenorrhea

*\*\*Common in women who participate in sports (e.g. competitive athletes, ballet dancers)*

*\*\*Eating disorders have a higher prevalence in female athletes than non-athletes*

*\*\*Hypothalamic disorder caused by abnormal gonadotrophin-releasing hormone pulsatility, resulting in impaired gonadotrophin levels, particularly LH, and subsequently low estrogen levels*



# pituitary amenorrhea

## Clinical types:

\*\*Hyperprolactinemia

\*\*Shehan's syndrome

# Hyperprolactinemia:

Galactorrhea is present in 1/3 of Pt

## Causes:

- Pituitary adenoma
- Idiopathic
- Hypothyroidism
- Medications e.g. phenothiazines, monoamineoxidase inhibitors
- Psychological disturbances

# Hyperprolactinemia:

## Treatment:

-Dopamine agonist e.g. bromocriptine

-Surgery

-Thyroxin replacement in hypothyroidism

cases

# Sheehan's syndrome :

--Pituitary necrosis following massive obstetric hemorrhage

--Pituitary inability to secrete gonadotropins

--Diagnosis by history, failure of lactation and decreased estrogen, gonadotrophin levels & other pituitary deficiencies.

--Treatment by replacement of deficient hormones for life.

# Ovarian amenorrhea (hypergonadotrophic hypogonadism)

## Clinical types:

- \*\*Gonadal dysgenesis
- \*\*PCO
- \*\*Premature ovarian failure
- \*\*Resistant ovary syndrome
- \*\*Ovarian destruction (radiation, chemotherapy, tumors)

# Gonadal dysgenesis

## Chromosomal pattern

- Classic Turner's syndrome (45XO)
- Turner variants (45XO/46XX), (46X-abnormal X)
- Mixed gonadal dysgenesis (45XO/46XY)

	<b>Classic Turner's</b>	<b>Turner Variant</b>	<b>Mixed Dysgenesis</b>
<b>phenotype</b>	<b>Female</b>	<b>Female</b>	<b>Ambiguous</b>
<b>Gonad</b>	<b>Streak</b>	<b>Streak</b>	<b>- Streak - Testes</b>
<b>Height</b>	<b>Short</b>	<b>- Short - Normal</b>	<b>Short</b>
<b>Somatic stigmata</b>	<b>Classical</b>	<b>±</b>	<b>±</b>
<b>karyotype</b>	<b>XO</b>	<b>XX/XO or abnormal X</b>	<b>XO/XY</b>

# Polycystic ovarian syndrome (PCO)

-Obesity, hirsutism, infertility, type 2 diabetes, dyslipidemia, risks of cardiovascular, endometrial hyperplasia and cancer

-A steady state of gonadotrophins and ovarian hormones

-Hyperandrogenism

-Increased LH/FSH ratio

-Insulin resistance

# Premature ovarian failure

- Depletion of ovarian follicles before the age of 40 years
- the etiology is unknown probably autoimmune
- diagnosis is established by repeated demonstration of high level of FSH & LH on 2-3 occasion at 3 months interval

# Uterine amenorrhea:

## Clinical types:

- Mullerian duct agenesis (Mayer-Rokitansky-Kuster-Hauser syndrome)
- Androgen insensitivity syndrome
- Asherman's syndrome

# Mullerian duct agenesis:

- Karyotype 46-XX
- Normal breasts and Sexual Hair development
- Normal female range testosterone level
- Absent uterus and upper vagina & Normal ovaries
- 15-30% renal, skeletal anomalies
- STERILE? Vaginal creation (dilatation VS Vaginoplasty)



# Androgen insensitivity syndrome:

- X-linked trait
- Absent androgen receptors
- Normal breasts but no sexual hair
- Normal looking female external genitalia
- Absent uterus and upper vagina
- Karyotype 46, XY
- Male range testosterone level
- Treatment : gonadectomy +  
Vaginal creation (dilatation VS  
Vaginoplasty )



	<b>Androgen Insensitivity</b>	<b>Mullerian Agenesis</b>
<b>Karyotype</b>	<b>46 XY</b>	<b>46 XX</b>
<b>Hereditary</b>	<b>X linked</b>	<b>sporadic</b>
<b>Sexual hair</b>	<b>Scanty or absent</b>	<b>Normal feminine</b>
<b>Other anomalies</b>	<b>rare</b>	<b>common</b>
<b>Testosterone</b>	<b>Male range</b>	<b>Female range</b>
<b>Inguinal mass or hernia</b>	<b>may be present</b>	<b>No</b>

# Asherman's syndrome:

- Secondary amenorrhea.
- History of pregnancy associated D&C
- Rarely after CS, myomectomy, TB or bilharzia endometritis.
- Diagnosis : HSG or hysteroscopy
- Treatment : lysis of adhesions by hysteroscopy + estrogen therapy + IUD or intrauterine catheter to prevent recurrence.

# Cryptomenorrhea

Outflow obstruction to menstrual blood due to:

- Imperforate hymen
- Transverse Vaginal septum or cervical atresia with functioning uterus

Clinically there are:

- Intermittent abdominal pain
- Possible difficulty with micturation
- Possible lower abdominal swelling
- Bulging bluish membrane at the introitus or absent vagina (only dimple)

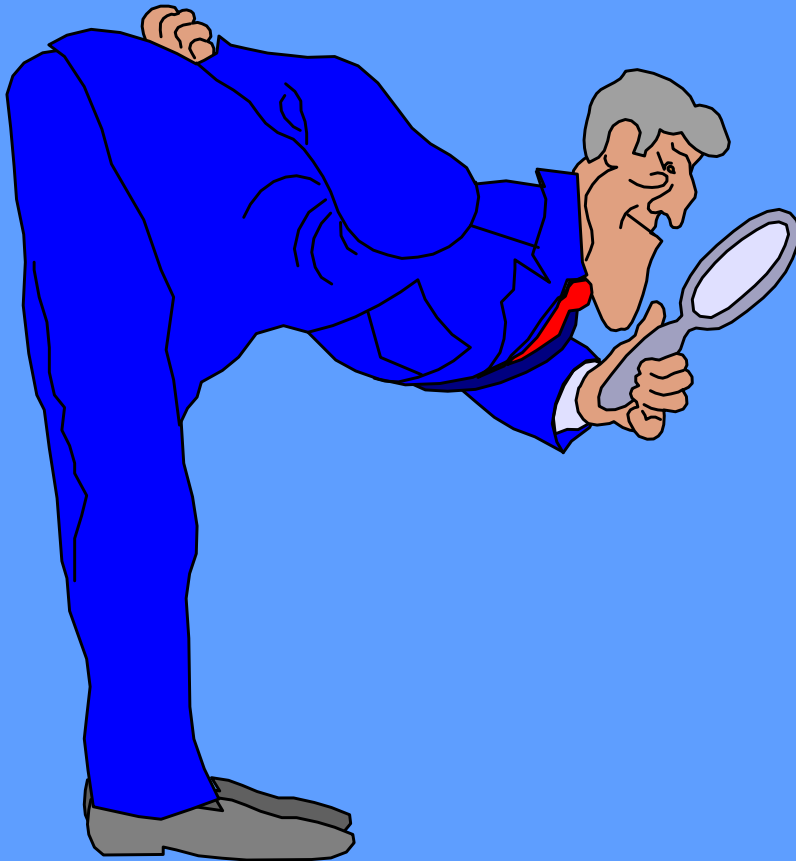
# Cryptomenorrhea



# AMENORRHOEA

## *AN APPROACH FOR DIAGNOSIS*

Exclude Pregnancy



- HISTORY
- PHYSICAL EXAMINATION
- INVESTIGATION

## Differential diagnosis:

### Underdeveloped breast and uterus present:

- Hypogonadotropic hypogonadism
- Ovarian dysgenesis

### Absent uterus and well developed breast:

- Androgen insensitivity Syndrome
- Mullerian duct agenesis

### Breast present and uterus present:

- Cryptomenorrhea
- Hyperprolactinemia, Sheehan's Syndrome
- PCO ,POF
- Ashermann's Syndrome

**THANK  
YOU**