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SECONDARY AMENORRHEA

→ **CESSATION OF MENSES FOR 6 MONTHS OR MORE IN A WOMENWHO HAS PREVIOUSLY MENSTRUATED.**

→ **ETIOLOGY**

1. **PHYSIOLOGICAL:**

PREGNANCY.

LACTATION.

MENOPAUSE.

2. **PATHOLOGICAL:**

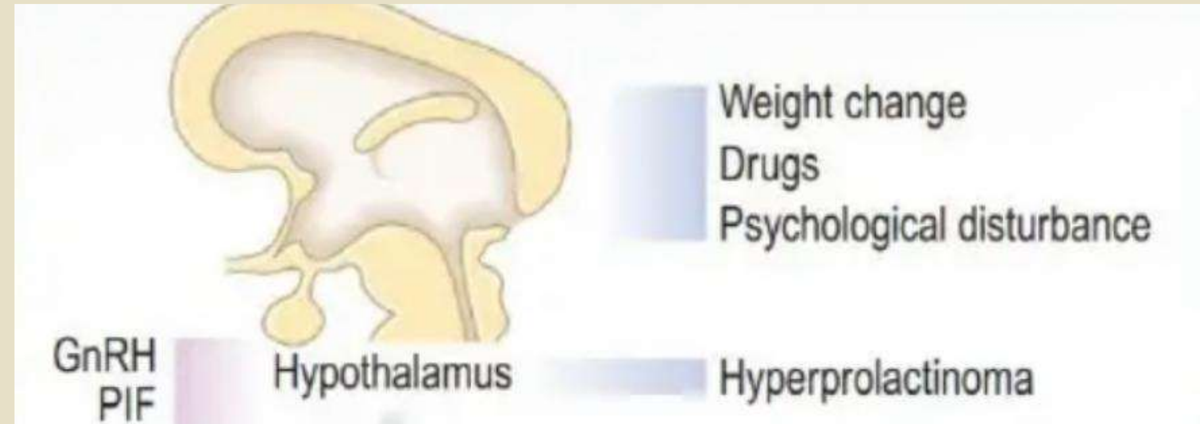
HYPOTHALAMIC DISORDERS.

PITUITARY DISORDERS.

OVARIAN DISORDERS REPRODUCTIVE OUTFLOW TRACT DISORDERS.

HYPOTHALAMIC DISORDERS

- **FUNCTIONAL HYPOTHALAMIC AMENORRHEA (FHA) :**
  - NON ORGANIC & REVERSABLE DISORDER IN WHICH IMPAIRMENT OF GnRH PULSATILE SECRETION PLAYS A KEY ROLE.
- **THREE TYPES:**
  - WEIGHT LOSS RELATED.
  - FHA STRESS RELATED FHA.
  - EXERCISE RELATED FHA.



- ***- FHA IS CHARACTERIZED BY LOW OR NORMAL LEVEL OF FSH & LH, NORMAL PROLACTIN.NORMAL IMAGING OF PITUITARY FOSSA & HYPOESTROGENISM.***

WEIGHT LOSS RELATED FHA:

- CRITICAL ROLE BETWEEN BODY WEIGHT AND MENSTRUATION.
- 10% TO 15% WEIGHT LOSS OF NORMAL WEIGHT FOR HEIGHT CAN CAUSE OLIGO OR AMENORRHEA.
- VIGORIUS EXERCISE.
- DIETING.
- ANOREXIA NERVOSA.

STESS RELATED FHA:

- CHANGE IN WORK, FAMILY, HOUSING OR RELATIONSHIP SITUATIONS.
- THOSE WHO COUPLESS WELL WITH STRESS-> RELEASE HIGHER CORTISOL LEVEL & ARE MORE PRONE TO FHA

EXERCISE RELATED FHA:

- SPORTS WOMEN → REQUIRE STERNOUS TRAININGFACTORS: LOW BODY FAT, PHYSIOLOGICAL & PHYSICAL STRESS & HIGH ENERGY EXPENDITURES.

NON FUCTIONAL CAUSES OF HYPOTHALAMUS

- **SPACE OCCUPYING LESION.**
- **SURGERY.**
- **KALLMAN'S SYNDROME.**

PITUITARY DISORDERS

- MOST COMMOM CAUSE IS HIGH PROLACTIN.
- HIGH PROLACTIN → DUE TO
  - I. **PROLACTIN SECRETING TUMOR (ADENOMA) OF ANTERIOR PITUITARY.**
  - II. **GALACTORRHEA IS COMMON FINDING.**
- ADENOMAS ARE MICROADENOMA AND MACROADENOMA.
- MOST COMMON IS MICROADENOMA.
- MACROADENOMA MAY CAUSE BITEMPORAL HEMIANOSPIA → COMRESSION OF OPTIC CHIASMA
- ANTI DOPAMINERGIC DRUGS CAN ELEVATE PROLACTIN.
- POST PARTUM NECROSIS OF ANTERIOR PITUITARY (SHEEHAN SYNDROME).

Box 16.1 **Drugs that may cause hyperprolactinaemia**

- Phenothiazines.
- Antihistamines.
- Butyrophenones.
- Metoclopramide.
- Cimetidine.
- Methyldopa.

OVARIAN DISORDERS :

- **OVARIAN FAILURE**

✓ **PREMATURE OVARIAN FAILURE (POF):**

→ IRREVESIBLE CESSATION OF OVARIAN FUNCTION BEFORE THE AGE OF 40

→ CHARACTERIZED BY AMENORRHEA & RAISED GONADOTROPIN LEVEL GENTIC FACTORS :FAMILY HISTORY, TURNER SYNDROME MOST OBVIOUS

✓ **AUTOIMMUNE OOPHORITIS**

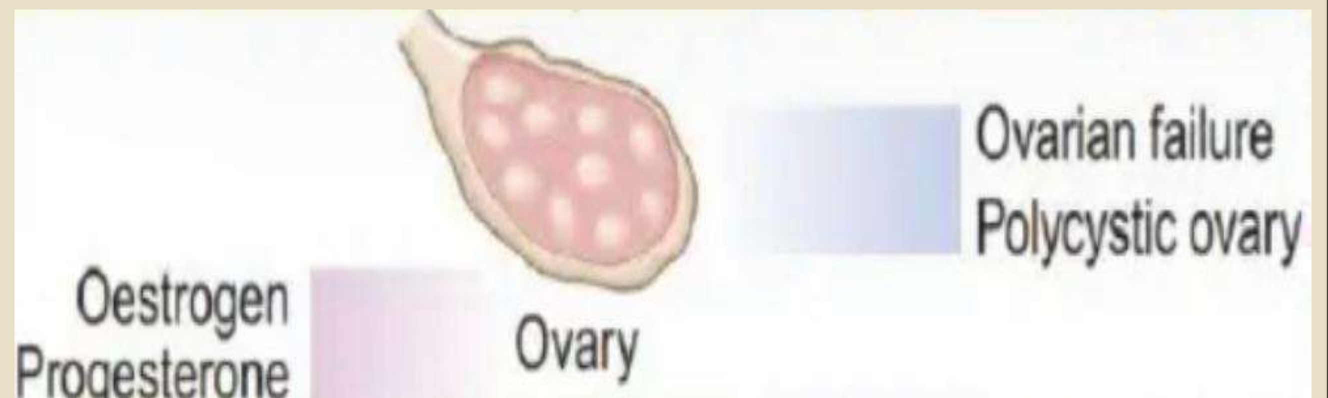
✓ **SURGICAL REMOVAL OF OVARIES OR DESTRUCTION BY RADIATION**

✓ **INFECTION**

✓ **RESISTANT OVARIAN SYNDROME**

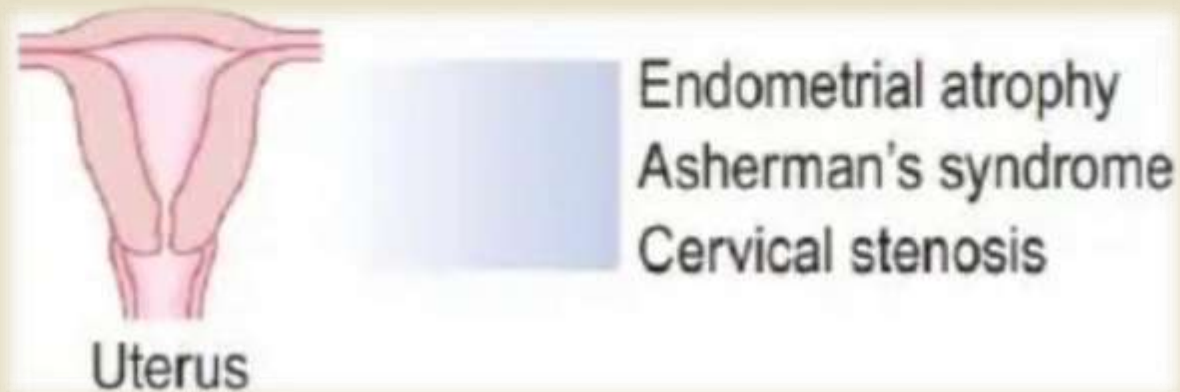
✓ **OVARIAN TUMORSO**

- **PCOS**



REPRODUCTIVE OUTFLOW TRACT DISORDERS

- SURGICAL REMOVAL OF UTERUS.
- CONDITION THAT SCAR THE ENDOMETRIUM AND CAUSE INTRAUTERINE ADHESION AND LOSS OF MENSES INCLUDE INFECTION OF TB AND ASHERMAN'S SYNDROME.
- CRYPTO MENORRHEA **(LITERALLY HIDDEN MENSTRUATION CERVICAL STENOSIS FROM SURGICAL PROCEDURE OR INFECTION CAN CAUSE BLOCKAGE OF MENSES THROUGH OBSTRUCTION OF OUTFLOW TRACT).**



EVALUATION OF PATIENT

HISTORY

- PREGNANCY.
- HISTORY OF RECENT EMOTIONAL STRESS.
- CHANGE IN WIGHT.
- MENOPAUSAL SYMPTOMS.
- CURRENT MEDICATION.
- OBS AND CONTRACEPTIVE HISTORY.
- HISTORY OF ANOSMIA.
- PAST MEDICAL AND SURGICAL HISTORY.
- FAMILY HISTORY OF PREMATURE MENOPAUSE.
- DEVELOPMENT OF ANY VIRILIZING SIGN OR GALACTORRHEA.

EXAMINATION

- **BMI.**
- **VISUAL FEILD DEFECTS EVIDENCE OF VIRILIZATION (DEEP VOICE, MALE PATTERN BALDING, CLITORIS ENLAGEMENT).**
- **ABDOMINAL AND PELVIC EXAMINATION.**

INVESTIGATION

- PREGNANCY TEST.
- PROGESTERONE WITHDRAWAL TEST.
- DD IS BASED ON MEASUREMENT OF FSH, LH,PROLACTIN, ESTRADIOL AND THYROID FUNCTION TESTS.
- PELVIC ULTRASOUND FOR PCOS, OVARIAN TUMORS, & ABNORMALITIES OF LOWER GENITAL TRACT.
- IMAGING OF PITUITARY FOSSA IF ELEVATED PROLACTIN OR SOME UNUSUAL FEATURES IN HISTORY SUGGESTING INTRACRANIAL PATHOLOGY.
- THYROID OR ADRENAL TESTS IF ANY SYMPTOM IS PRESENT.

MANAGEMENT

- DEPEND UPON CAUSE.
- OUTSIDE PHYSIOLOGICAL CAUSE MAJORITY ARE HYPOTHALAMIC OR PCOS IN ORIGIN.
- MAJORITY RESOLVE SPONTANOUSLY.
- IF WEIGHT IS NOT IN THE RANGE OF BMI → RESTORE IT IN RANGE.
- IF ESTRADIOL IS LOW → ADMINSSTER CYCLICAL ESTROGENPROGESTERONE THERAPYHY.
- HYPERPROLACTEMIA → STOP DOPAMINE INHIBITING DRUGS.
- OR TREAT WITH DOMAMINERGIC DRUGS
- TREAT THE PCOS.

THANK YOU FOR LISTENING