Primary Ovarian Insufficiency (Premature Ovarian Failure)

PLAY PICMONIC

Pathophysiology

Premature Ovarian Failure
Incubator and Ovaries with Fail-file
Primary ovarian insufficiency is also referred to as premature ovarian failure.

Before Forty (40) Years Old
(40) oz
Primary ovarian insufficiency should be suspected in patients with decreased sex hormone levels after puberty and under the age of 40.

Etiology

Idiopathic
Idiot Hat
Primary ovarian insufficiency can have a number of causes, one of which is idiopathic because the exact cause is not always known.

Turner Syndrome
Turnip
Turner syndrome is a genetic cause of primary ovarian insufficiency. In Turner syndrome, there is a lack, or partial loss, of one of the X-chromosomes. Primary ovarian insufficiency can occur in turner syndrome because there is an accelerated loss of follicles in the ovaries that leads to dysgenesis of the ovaries. This loss occurs before or after puberty. Notably, these patients experience menopause before menarche.

Fragile X Syndrome
Fragile-box with X-chromosome
Fragile X syndrome is an X-linked dominant disease that consists of trinucleotide repeats CGG. This disease presents with features such as developmental delay, autism, large ears, and a long face. The risk of Fragile X patients developing primary ovarian insufficiency increases with the number of trinucleotide repeats present. When there are 50–200 CGG repeats, there is a chance of developing primary ovarian insufficiency.

Autoimmunity
Auto-in-moon
Primary ovarian insufficiency can be caused by autoimmune disease. Autoimmunity frequently targets the ovary, which manifests as primary ovarian insufficiency.

Diagnosis

Signs of Menopause
Man-paws
Primary ovarian insufficiency appears as menopausal symptoms due to a lack of sex hormone production, specifically a lack of estrogen. These signs include hot flashes, atrophy of the vagina, amenorrhoea, and sleep disturbances.

Decreased Estrogen

Down-arrow Easter-egg

The ovary produces a decreased level of estrogen. Low estrogen levels lead to typical menopausal symptoms.

Increased LH

Up-arrow Luge

There are increased levels of LH in patients with primary ovarian insufficiency. This increase occurs due to a lack of negative feedback from estrogen.

Increased FSH

Up-arrow Fish

There are increased levels of FSH in primary ovarian insufficiency. This increase is due to a lack of negative feedback from estrogen. Usually, FSH is higher than LH.