

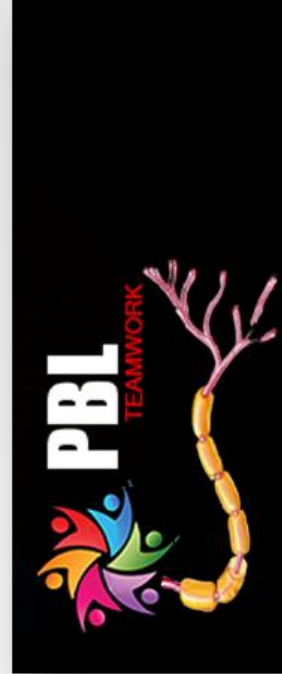
**Case 1:** ..Am I different?



## ❖ Learning issues:

1. Structures and functions of the female reproductive system
2. Role of the hypothalamic – pituitary – ovarian axis in control of menstruation
3. Physiology of menstruation
4. Physiology of puberty. Physiological and psychological changes occurring during puberty and underlying mechanisms
5. Physiological actions of estrogen and progesterone and regulating mechanisms
6. Secondary sexual characteristics





## ❖ Key information and Presenting problems:

- Lila, female, 15 years old, student
- Has not had her 1<sup>st</sup> period yet
- No changes in her breast.
- Feels left behind and uncomfortable.

## ❖ New problems and history:

- No history of cyclical abdominal pain
- She has no pubic and armpit hair
- No changes in her appetite and she isn't on diet
- No history of headaches, vomiting or double vision
- Past Medical History: Nil
- Family History: Her sisters and mother have their first period (**menarche**) when they are at 14 years old.
- Medication and Allergy: Nil
- Social History:
  - No close friends
  - Unhappy and stressed because of her body and her undeveloped breasts
  - She worried and wonders about when she will have her period
  - Feels different from other girls

NEW TERMS	
Armpit	Which known as Axilla
Menarche	First menstrual cycle in females
Webbing of the neck	Extra skinfold at neck base, and It's a feature of Turner syndrome
Hymen	a membrane that surrounds or partially covers the external vaginal opening

## Clinical examination

- Lila's bodyweight is 43 kg and her height is 145 cm (**Normal**)
- She looks shy and lacks confidence
- She has no webbing of the neck and no other external anomalies
- Axilla shows sparse and scanty hair
- Undeveloped breasts for her age
- She has no goiter and her thyroid gland is normal to palpation

## Vital signs

Normal

## External genitalia and pelvic examination

- Fewer darker hairs along the labia majora
- Minimal development of labia minora and labia majora
- Hymen is normal
- Ultrasound of the pelvis confirms the presence of a normal uterus and ovaries for her age

## Abdominal examination

Normal

## CVS and respiratory examinations

Normal



## ■ Investigations:

- **1. Full blood count:** Normal.
- **2. Hormonal assays:** • *Low* FSH\* • *Low* LH\* • *Low* estradiol\*
- **3. Thyroid function tests:** Normal.
- **4. Chromosomal studies:** Normal.

\* Due to the lack of stimulation from the hypothalamic – pituitary – ovarian axis

## ■ Diagnosis:

- ✓ **Delayed puberty.** There are factors that can affect the onset of puberty, such as:
  - Severe stress
  - Family history of delayed puberty
  - Loss of body weight

### Puberty:

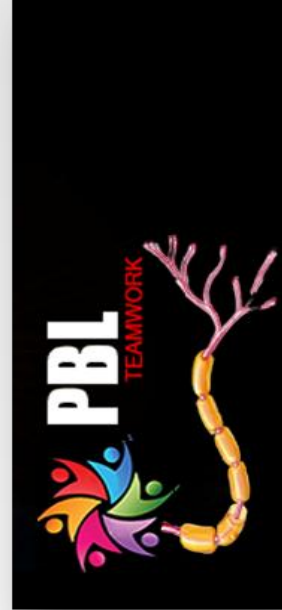
- Is the period where girls experiences:
  - ✓ Change in their bodyweight and body shape
  - ✓ The growth of their breast
  - ✓ Appearance of hair in armpits and pubic area
  - ✓ The time where a girl starts her monthly period

## ■ Management:

- Dr. Mona said: the delay in the stimulation of the hypothalamus is within normal.  
We expect that within **the next 4 to 6 months Lila will have her first period.**

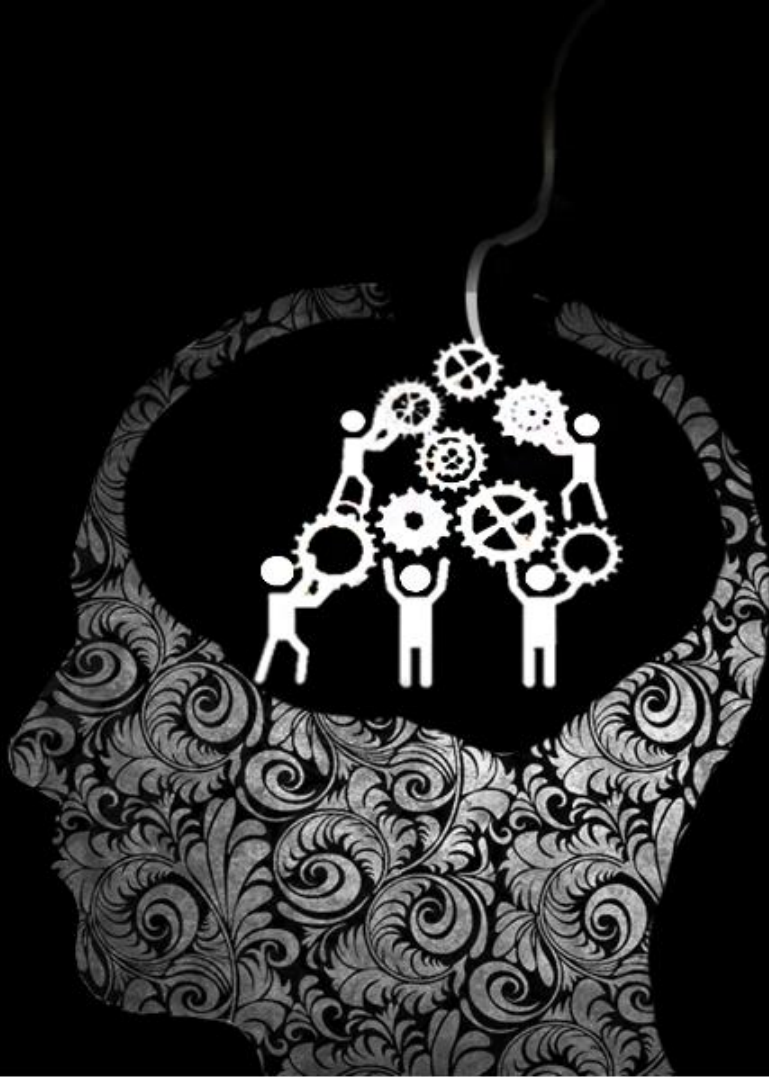
## ■ Prognosis:

- ✓ About 4 months later, **Lila had her first period**



# Questions

<b>Q1: What is the diagnosis?</b>	<b>Q2: What is the first event that happens in girls' puberty?</b>
Delayed puberty	Breast development (Thelarche)
<b>Q3: Why the doctor asked to do thyroid function test?</b>	<b>Q4: Mention factors that can affect the onset of puberty?</b>
To exclude hypothalamic – pituitary – gonadal axis problem	<ul style="list-style-type: none"><li>• Severe stress</li><li>• Family history of delayed puberty</li><li>• Loss of body weight</li></ul>
<b>Q5: The hormones (FSH, LH, Estradiol) are low because of:</b>	<b>Q6: What does menarche mean?</b>
the lack of stimulation from the hypothalamic – pituitary – ovarian axis, and It's within normal	First menstrual cycle in females
<b>Q7: The doctor mentioned (no webbing of the neck), It means:</b>	<b>Q8: What is the reason that delays the onset of menarche?</b>
Exclusion of Turner syndrome	Stress about her body and undeveloped breast



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