The Most Important Differential Diagnoses for Secondary Amenorrhea

Especially in oral exams, possible differential diagnoses for a corresponding symptom are often requested. You will then have to show that you do not only have detailed knowledge about a few medical conditions, but are also able to think across disciplines. As a repetition, we will give you a brief overview of the possible causes of secondary amenorrhea.

Definition of Amenorrhea

The absence of menstruation occurs physiologically before menarche, during pregnancy and lactation, as well as postmenopausal. If no menstruation has occurred at the completion of the 16th year, a so-called **primary amenorrhea** occurs. Possible causes are, inter alia, an atresia of the hymen, vaginal septa, competitive sports, the Ullrich-Turner syndrome, malnutrition, the adrenogenital syndrome or the polycystic ovary syndrome.

A **secondary amenorrhea** is the absence of menstruation for a period of at least 3 months after a previously regular cycle without an existing pregnancy.
Differential Diagnoses

Background knowledge for secondary amenorrhea

You will find a broad division into the respective disciplines – naturally with numerous overlaps- to allow you to assign the differential diagnoses quickly and thus lose none of your precious time in exams.

Be careful: do not only identify the disease, but also a few background facts. In an exam situation, this method proves that you have a comprehensive understanding and the tutors will be satisfied more quickly than if they have to “worm everything out of your nose”. A rough classification is also beneficial in your future clinical practice!

Endocrinology and internal medicine

- **Congenital adrenal hyperplasia** (Overproduction of androgens by disturbed Kortisolbildung in the adrenal cortex): For 21-hydroxylase deficiency of the woman, a female genotype is seemingly a male phenotype. Uterus and ovaries are, however, set up (pseudohermaphroditism femininus).
- **Acromegaly**: In addition to an increase in the extremities, vision problems, joint pain, fatigue, the amenorrhea is also a symptom of acromegaly.
- **Sheehan’s syndrome**: In the case of postpartum hypopituitarism, there is a complete or partial failure of the anterior pituitary. In addition to many other symptoms during FSH/LH deficiency, an amenorrhea occurs.
- **Inflammatory bowel disease**: Especially during Crohn’s disease, amenorrhea can occur during the active thrust.
- **Diabetes mellitus I and II**: Amenorrhea may occur especially in poorly controlled blood glucose levels.
- **Hyperprolactinemia**: additional distribution of the hormone prolactin may be caused by a pituitary adenoma (prolactinoma) or medication (eg. metoclopramide).
- **Hypothyroidism**: The amenorrhea is here grouped among symptoms like loss of libido and fertility problems. Hyperthyroidism in Graves’ disease may also be the reason.

Gynecology

- **Endometriosis**: Scattered endometrial tissue is found intra-/extra-genital or extra-abdominal. Besides menstruation ailments like spotting, menorrhagia, metrorrhagia or hypermenorrhea it can also cause amenorrhea.
- **Polycystic ovary syndrome**: Multiple cysts in the ovaries lead to increased androgen production with anovulatory cycles and virilization (DD: congenital adrenal hyperplasia)
- **Ovarian tumor**: Clinical symptoms are pelvic pain, palpable/visible protrusions.
- **Menopause praecox**: A complete ovarian failure before the age of 40. There are various reasons (eg. autoimmune/metabolic diseases, radiotherapy/chemotherapy).

Psychiatry/Psychosomatics

- **Psychogenic**: By a changing rhythm of life and/or change of the environment, e.g. through travelling and/or extreme change in climate, menstruation may
not occur over a longer period.

- **Anorexia nervosa**: A secondary amenorrhea may occur as a result of complications of eating disorders, including anorexia nervosa and bulimia. The cause is a hormonal imbalance with increased cortisol secretion. The body creates a sort of “natural contraceptive protection” because it would not be able withstand a pregnancy. Often the patients perceive this more as a relief, which complicates the compliance with the therapy additionally.

- **Depression**: In a manifest or depressive episode menstruation may not occur for months or years.

### Side Effects

- **Anabolikaabusus**: Hyperandrogenism, often combined with extreme performance sports.

- **Cushing’s syndrome**: The most common cause of hypercortisolism is the exogenous glucocorticoids. Symptoms among others include not only androgenisation of women but also truncal obesity, peripheral muscle wasting, osteoporosis and arterial hypertension.

- **Radio-/chemotherapy**: Irreversible damage to the ovaries leads to premature menopause (climacteric praecox).

- **Psychiatric medication**: Tricyclic antidepressants and neuroleptics, especially risperidone, are potential polluters of amenorrhea (NW: hyperprolactinemia), as are corticosteroids (see Cushing’s syndrome).

### Additional Tips

In practical work you do not have to be familiar with every single disease including diagnosis and treatment – as opposed to situation in your medical exams. However, you must be able to consider and decide whether colleagues from other fields should be consulted, and if so, which.

With just a few non-invasive means, such as medical history, physical examination, complete blood cell counts, based hormone parameters and sonography, your diagnostic skills will be much improved.

Before any further diagnostic evaluation, however, you should always do a **β-HCG-test** to exclude pregnancy!

### References


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