Amenorrhea is the absence of menstrual bleeding. There are two types of amenorrhea, primary and secondary. Although amenorrhea may result from a number of different conditions, a systematic evaluation including a detailed history, physical examination, and laboratory assessment of selected serum hormone levels can usually identify the underlying cause. Treatment goals for patients with amenorrhea may vary considerably, and depend on the patient and the specific diagnosis. The objective of the presentation is to describe the modern algorithms for the diagnosis and treatment of different types of amenorrhea and relate the major recommendations for the patient management.

Congenital malformations of the female genital tract are common miscellaneous deviations from normal anatomy with amenorrhea and reproductive consequences. Until now, three systems have been proposed for their categorization but all of them are associated with serious limitations. The new ESHRE/ESGE classification system of female genital anomalies will be presented.

Turner syndrome is usually accompanied by hypergonadotropic hypogonadism and primary or secondary amenorrhea due to gonadal dysgenesis. European Society of Endocrinology Clinical practice guidelines 2017 recommend that estrogen replacement should start between 11 and 12 years of age increasing to adult dosing over 2–3 years (moderate recommendation), and adding progesterone once breakthrough bleeding occurs or after 2 years of estrogen treatment (strong recommendation).

Functional hypothalamic amenorrhea (FHA) is a form of chronic anovulation, not due to identifiable organic causes, but often associated with stress, weight loss, excessive exercise, or a combination thereof. Investigations should include assessment of systemic and endocrinologic etiologies, as FHA is a diagnosis of exclusion. Diagnostic options of FHA include physical examination, progestin challenge test, abdominal or transvaginal ultrasound, and/or MRI, depending on the context and patient preferences. In adolescents and women with FHA, an Endocrine Society Clinical Practice Guideline 2017 recommend correcting the energy imbalance to improve hypothalamic–pituitary–ovarian axis function, psychological support, and short-term use of transdermal E2 therapy with cyclic oral progestin (not oral contraceptives or ethinyl E2) in adolescents and women who have not had return of menses after a reasonable trial of nutritional, psychological, and/or modified exercise intervention.

Premature ovarian insufficiency is a clinical syndrome defined by loss of ovarian activity before the age of 40. POI is characterised by menstrual disturbance (amenorrhea or oligomenorrhea) with raised gonadotropins and low estradiol. Guideline of the European Society of Human Reproduction and Embryology 2015 recommends the following diagnostic criteria: oligo/amenorrhea for at least 4 months, and an elevated FSH level > 25 IU/l on two occasions > 4 weeks apart. Untreated POI is associated with reduced life expectancy, largely due to cardiovascular disease. Women with POI should be informed that there is a small chance of
spontaneous pregnancy (GPP). Oocyte donation is an established option for fertility in women with POI. Spontaneous pregnancies after idiopathic POI or most forms of chemotherapy do not show any higher obstetric or neonatal risk than in the general population. Hormone replacement therapy is indicated for the treatment of symptoms of low estrogen and to reduce future risk of cardiovascular disease, cognitive impairment, reduced bone mineral density in women with POI. Hormone replacement therapy with early initiation is strongly recommended in women with POI to control future risk of cardiovascular disease; it should be continued at least until the average age of natural menopause.

References