

The 12-year-old-girl with imperforate hymen

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INTRODUCTION

The hymen is located between the vulva and the vagina and physiologically develops from the mesodermal tissue in utero. The central part of the membrane is made of epithelium, which should be perforated by the end of embryonic development. In the case when this process does not occur, it causes an event of imperforate hymen. It is a rare defect of the genital organs in women, with an estimated incidence in the world of 0.01–0.1% [1–3].

Most cases are diagnosed in adolescence. Hymen imperforate in this period may be manifested by primary amenorrhea, cyclic lower abdominal pain, problems with urination, and other complications related to these conditions [1, 3]. Before puberty the hydrocolpos or mucocolpos is observed. In women who have already started menstruating, due to the inability to drain menstrual blood, hematocolpos appears. Initially, the blood accumulates in the vagina, then in the uterus and fallopian tubes. The discomfort in the sacral area is caused by irritation of the sacral plexuses by the organs swollen with secretions. This dysfunction may cause pressure on the neck of the bladder, ureters or urethra, and consequently result in obstructive uropathy. It is associated with the possibility of urogenital inflammation, hydronephrosis or, in extreme cases, in the acute renal failure [1–3]. Other symptoms associated with tamponade in the vaginal area include palpable tumor in the area of the small pelvis, intestinal obstruction caused by pressure on the enlarged uterus, or lymphoedema of the lower limbs [2]. In order to make a correct diagnosis, the patient must undergo a gynecological examination and an ultrasound examination of the reproductive organs [3]. The main therapy is surgery to remove the obstructed membrane - and it is called hymenotomy. Depending on the time of diagnosis and individual factors, the procedure can be performed before and after the onset of menstruation [2]. There are several techniques for incision of the hymen. It is recommended that the patient is catheterised as a preventive measure before making the incision of the membrane. Making an X-shaped incision is also an activity that protects the urinary tract [2, 3].



Figure 1. Ultrasound examination of the uterus

CASE PRESENTATION

A 12-year-old girl was admitted to the Department of Pediatric and Adolescent Gynecology in Katowice according to the diagnosis of imperforate hymen. The diagnosis was made during the hospitalisation on pediatric ward at the age of 1. Until puberty the patient was under the supervision of a pediatric and adolescent gynaecologist.

For over few last months of maturation, an increase in the endometrium and accumulation of menstrual blood in the vagina (hematocolpos) have been observed in the ultrasound examination. Furthermore, the girl had informed about cyclic, cramping abdominal pain from the last three months, which means that the girl was probably in the third menstrual cycle.

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Figure 2. Follow-up visit after 2 weeks of the treatment



Figure 3. Follow-up visit after 2 weeks of the treatment

Physical examination was unremarkable with M4P4 Tanner staging evolution of secondary sexual characteristics. A transabdominal ultrasound examination revealed an anteverted, homogeneous echo pattern uterus sized at 32 x 28 mm, endometrium 13 mm. The right and left ovary were in the proper size. The vagina was extended to 18 x 73 mm. The girl was treated with an X-shaped incision of the hymen resulting in a bloody fluid outflow. At the control examination after two weeks of the treatment process, the patient recovery was uneventful. The further follow up of the patient was recommended.

CONCLUSIONS

An imperforate hymen is rare condition. When it is diagnosed in the neonatal period, it allows for earlier surgical intervention. Therefore, in adolescence, the patient can avoid unpleasant symptoms. During the procedure under general anesthesia, incision or excision of the hymen is recommended [2, 3].

Article information and declarations

Conflict of interest

All authors declare no conflict of interest.

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