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IMAGES IN CLINICAL PRACTICE

HYDROCOLPOS IN A FEMALE NEWBORN

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A 3 week-old-female newborn, was referred to our institution with vaginal swelling and lower abdominal mass. Genital examination revealed the presence of a bulging swelling at the vaginal introitus that completely obstructs the vagina. Routine investigations including renal function tests were all within normal limits. Abdominal ultrasound revealed the presence of a huge fluid-filled cystic abdominal mass with bilateral hydroureteronephrosis. A provisional diagnosis of hydrocolpos secondary to imperforate hymen with pressure effect on the lower urinary tract was made. The baby was taken to the operative room, hymenotomy through a simple hymenal incision and subsequent drainage of the accumulated vaginal fluid was made (Figure 1). The baby experienced uneventful postoperative recovery and abdominal ultrasound is done 3 weeks later, confirmed resolution of bilateral hydroureteronephrosis.

Figure 1. Bulging imperforate hymen. Note drainage of the cloudy white fluid " hydrocolpos" at the beginning of hymenotomy.



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What is the diagnosis?

Imperforate hymen is a rare congenital anomaly of the female genital tract with an estimated incidence of about 0.05-0.1%.[1] The anomaly is attributed to failure of the urogenital sinus endoderm to completely canalize, resulting in a hymen that completely obstructs the vaginal opening and hence the genital outflow.[1,2] Imperforate hymen is often diagnosed in adolescent girls with primary amenorrhea, cyclic abdominal pain, urinary retention, and/or lower abdominal mass secondary to accumulation of menstrual blood.[1,2] Rarely, however, the diagnosis can be established in the neonatal period as the maternal, estrogen-induced, fetal genital tract secretions will accumulate in the obstructed vagina resulting in its distension "hydrocolpos", with a bulging hymen. This in turn, may lead to serious consequences, as the distended vagina may cause pressure effect on the lower urinary tract with obstructive uropathy that may progress to renal failure. Hence, early detection and intervention is important to avoid such life-threatening renal failure.[1,3,4] The treatment of choice is based on cruciate incision or excision of the hymen. Hymen-preserving techniques can be offered for patients desiring virginity. Alternative treatments include a carbon dioxide laser or insertion of a Foley catheter.[1]

Although rare, hydrocolpos secondary to imperforate hymen can develop in newborns. Healthcare providers should be aware of this pathology as an urgent surgical intervention may be necessary to avoid life-threatening conditions.

Compliance with Ethical Standards
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