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Purulent Abdominal Abscess Presented by Hydrometrocolpos in a Newborn

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Abstract

In this study, a 3-day-old newborn with ambiguous genitalia and abdominal mass - the cause of which was not determined in multiple ultrasounds- is introduced. The ultrasound indicated severe bilateral hydronephrosis in the newborn, and based on the results of the tests, the catheterization and VCUG was performed using cystoscopy. According to the results of ultrasound, hydrometrocolpos was suspected for the newborn and surgical procedure was performed. It turned out that the mass was an abdominal abscess filled with pus, and due to its pressure on the urethra, we had to perform nephrostomy on the patient.

Keywords: Abscess, Hydrometrocolpos, Newborn

1. Introduction

Hydrometrocolpos describes an accumulation of uterine and vaginal secretions as well as menstrual blood in the uterus and vagina. In most cases, this condition reveals at the time of puberty as a result of obstruction of the female genital tract. The most common cause of hydrometrocolpos is imperforate hymen caused by failure in partial resorption of this membrane during the embryonic development. The incidence is 0.0014–00.1 % in full-term newborns (1). Congenital hydrometrocolpos is extremely rare with an incidence of about 0.006% (2).

In this study, we have presented the case of a newborn with ambiguous genitalia suspected of hydrometroclopes.

2. Case Presentation

The term neonate weighing 2230 g was born with abdominal mass and ambiguous genitalia, with the ultrasound indicating moderate and severe bilateral hydronephrosis in the patient. The creatinine level of the patient was high (Cr = 2.5). Thus, with the possibility of congenital hydronephrosis, a renal and surgery consultation was sought for the patient. To complete the diagnostic tests, VCUG was requested for the patient. Since catheterization could not be performed normally, it was placed using sigmoidoscopy and cystoscopy of the catheter. In a series of ultrasounds requested for the patient, the origin of the mass was unclear and the patient had a vesicular fistula, and the hydronephrosis was suspected. The patient was operated with the results of surgical pathology showing abdominal purulent abscess.

At the same time, the pressure on the ureter and kidneys induced hydronephrosis and kidney failure, so the nephrostomy was performed on the patient and creatinine level dropped.

For ambiguous genitalia of the patient, gland and karyotype consultations were sought. In term of gender, the neonate had XX karyotype and was female, but her appearance was male-like.

After two months of follow-up, the patient is in normal health condition.

3. Discussion

Congenital hydrometrocolpos has been reported as a cause of abdominal mass in newborns in several cases over the past decades (3-6). In our recent case, the neonate was born with ambiguous genitalia and severe hydronephrosis. Hydrometrocolpos is a condition characterized by uterine and vaginal inflation caused by a blood bag, which usually leads to obstruction in the distal vagina and the secondary infection causes pyometrocolpos (3,6), which is extremely rare in neonates (1 in 16,000 live births) (7). In the present case, based on ultrasound results, hydrometrocolpos was suspected for the neonate, but it was ruled out after the surgery, as the mass was a purulent abscess full of pus.

Mittal stated (6) that previous reports on low incidence of hydrometrocolpos can complicate diagnosis and raise mortality rate (6). In this case, we also encountered a diagnostic problem and the pressure of mass on kidneys and ureters resulted in nephrostomy of the newborn.

Associated anomalies may include congenital abnormalities of the reproductive system such as vaginal atresia, transverse vaginal septum and imperforate hymen. Among obstructive abnormalities, imperforate hymen has been described as the most

common cause of hydrometrocolpos. It is caused by defective membrane during embryonic development and also hymen failing to rupture during the eighth week of pregnancy, and its incidence in the newborns is less than 0.01%. (8). In the present case, one reason for diagnostic complication was that the patient looked like a boy, which ruled out the possibility of hydrometrocolpos. Further tests revealed that the patient had XX karyotype with gland test indicating 170Hpro for the neonate, which suggested CAH.

Previous studies have reported hydrometrocolpos as the common cause of abdominal cystic mass before delivery (5). However, in the present case, pre-natal test results were negative and only hydrometrocolpos was diagnosed. In the first days of birth, the creatinine of the patient was on rise. Sharifi Aghdas et al. also stated that the hydrometrocolpos could induce urinary stasis and renal failure due to abnormal uropathy (9). The delayed diagnosis led to the nephrostomy of the neonate. Considering strong recommendations about performing an MRI after ultrasound for early diagnosis, greater attention should be paid to this issue (10).

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