A Rare Case Report of Hydrometrocolpos in a Female Newborn

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ABSTRACT

Introduction: Congenital hydrocolpos and the hydrometrocolpos is a rare disorder caused by accumulation of cervico-vaginal secretions that present with cystic pelvic mass in neonates. Prenatal diagnosis is important to prevent complications like sepsis and renal failure and to affect prognosis. We will report a case of a newborn female admitted to our NICU with abdominal mass and imperforated anus diagnosed to have hydrometrocolpos, septated vagina with bicornate uterus and urogenital sinustreated surgically.

Case Report: This report will help us to develop a high index of suspicion of hydrometocolpos in female newborn with abdominal mass.

Key Words: Hydrocolpos, Hydrometrocolpos, Neonatal Intensive Care Unit (NICU).

INTRODUCTION

Hydrocolpos and hydrometrocolpos is uncommon disorder caused by vaginal distention and fluid accumulation (1). Congenital hydrocolpos can be associated with other genito-urinary anomalies or it can be a part of a syndrome. Prenatal diagnosis either by ultrasound or magnetic resonance imaging is essential to prevent complications (1, 2).

CASE REPORT

We report a case of 35 weeks and 5 days preterm girl with history of normal vaginal delivery to a 19 years old mother, G1P1A0 admitted to our neonatal intensive care unit (NICU) with abdominal distension, lower limbs swelling and imperforated anus. The pregnancy though uncomplicated was poorly followed and no antenatal ultra-sonograms (US) were available. On physical examination, the baby had a palpable mass in the lower mid abdomen. The superior margins of the mass were well felt and appreciated. Both lower limbs found to have pitting pedal edema. She had low imperforated anus. The child was referred to Department of Radio-dagnosis for evaluation of the abdominal mass. A plain radiograph of the abdomen (KUB) was initially obtained and showed homogenous soft tissue opacity in the suprapubic region of the abdomen that was causing peripheral displacement of the bowel loops (Figure 1).

Figure 1: (KUB) Homogenous soft tissue opacity in the suprapubic region of the abdomen that was causing peripheral displacement of the bowel loops.

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Ultrasound of the abdomen was done at the same time and showed that there was a huge fluid filled structure occupying almost all the abdomen and showing a midline septations. This mass was causing displacement of the liver superiorly. Bowel loops were being displaced peripherally. There was also bilateral hydronephrosis. Rest of the intra-abdominal organs appeared to be normal (Figure 2).

Following ultrasound, a preliminary diagnosis of neonatal hydrometrocolpos was made. A computed tomography scan (CT Scan) of the abdomen and pelvis was done immediately after KUB and US to reveal a cystic mass 8.5x8.2x6 cm occupying the abdomen and pelvic cavity with median septations and double thin walls extending down to the rectum with severe bilateral hydronephrosis. The uterus was not well dilated (Figures 3a, 3b, and 3c).

Figure 2: (US of Abdomen and Pelvis) Huge fluid filled structure occupying almost all the abdomen and showing a midline septations.

DISCUSSION AND REVIEW OF LITERATURE

Hydrocolpos is an uncommon disorder that can be associated with genitourinary anomalies ranging from persistent urogenital sinus to cloacal dysgenesis (1). It can be defined as vaginal distention with fluid accumulation and it can be due to either a combination of increased activity of secretory cervical glands and vaginal obstruction or the presence of urogenital sinus with urine collection (1, 2). Hydrometrocolpos is characterized by uterine distention that might result if the accumulated fluids stretch the cervical canal as well as the body of the uterus (2).

The causes of accumulation of cervico-vaginal secretions are diverse and include imperforate hymen which is defined as a membrane occluding the lower third of vagina, transverse vaginal septum, vaginal atresia and malformations of cloaca including urogenital sinus (2,3). Cloacal malformations form a group of non-hereditary ano-rectal malformations. The cloaca is defined as a single common chamber of the caudal intestinal, urinary, and genital tract; it is normally present in the 4th to 5th week embryogenesis. Later in the fetal life the cloaca will be divided into the urogenital sinus anteriorly and ano-rectum posteriorly. The urogenital sinus then becomes the urinary bladder and urethra with a portion transformed into the vagina and hymen. The type of cloacal anomalies will results from the timing of developmental arrest (4). Hydrometrocolpos rare with an incidence of 0.006% approximately (2, 3). Bischoff et al. reported a high incidence of hydrometrocolpos in patients with cloacal malformations (28%) (5). Child with this disorder presents clinically with increasing abdominal distension (3). Prenatal diagnosis of hydrometrocolpos by radio-imaging may be difficult but is essential in that it can substantially affect prenatal and immediate neonatal treatment and it can help improving prognosis (4). Ultrasonography and in particular magnetic resonance imaging can be helpful in the antenatal diagnosis of congenital hydrometrocolpos. Magnetic resonance imaging (MRI) provides information in cases in which the diagnosis is unclear or additional anomalies cannot be adequately evaluated.
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Hydrometrocolpos is uncommon disorder of neonates that can present with a midline abdomino-pelvic mass. Ultrasound and magnetic resonance imaging can help in the prenatal diagnosis and early surgical treatment for better outcome and prognosis. This report will aid us to the development of high index of suspicion of congenital hydrometrocolpos in neonates with pelvic mass for early and even antenatal diagnosis that lead to further prevention of secondary complications such as hydronephrosis and gastrointestinal obstruction.

CONCLUSION

Hydrometrocolpos is uncommon disorder of neonates that can present with a midline abdomino-pelvic mass. Ultrasound and magnetic resonance imaging can help in the prenatal diagnosis and early surgical treatment for better outcome and prognosis. This report will aid us to the development of high index of suspicion of congenital hydrometrocolpos in neonates with pelvic mass for early and even antenatal diagnosis that lead to further prevention of secondary complications such as hydronephrosis and gastrointestinal obstruction.

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REFERENCES

It is a rare pathology affecting the female newborn and infant and much less often young girls. It appears clinically as an abdominal mass associated with absence or abnormality of the vaginal opening. The diagnosis is confirmed by abdominal echography and CT scan. Treatment varies from the simple X-shaped hymenotomy for the isolated imperforate hymen to major surgery for substantial retentions and complex urogenital abnormalities. The authors report two cases of hydrocolpos and hydrometrocolpos discovered in the neonatal period. These were two newborn babies resulting from poorly followed pre