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NEONATAL HYDROCOLPOS CAUSED BY IMPERFORATE HYMEN-A RARE CASE REPORT WITH REVIEW

Paediatric Surgery

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ABSTRACT

Hydrocolpos is a condition in which cervicovaginal fluid accumulates inside the vaginal cavity. [1]. If fluid accumulates up to uterus then it is called as hydrometrocolpos. Hydrocolpos or hydrometrocolpos in neonatal period is very rare. It usually present as a lump in lower abdomen and difficulty in micturition.The most common congenital cause is imperforate hymen [2]. Other causes include vaginal agenesis, persistent urogenital sinus and common cloaca. [3, 4]. Careful perineal examination, ultrasonography and MRI abdomen is an important tool to make diagnosis. We are presenting one neonates with Hydrocolpos due to imperforate hymen.

KEYWORDS

Imperforate hymen, Hydrocolpos, Hydronephrosis

INTRODUCTION-

Hydrocolpos or hydrometrocolpos is a rare condition in neonatal period. It is due to gradual accumulation of ervicovaginal fluids inside the vagina or up to uterus due to effect of maternal estrogen. The cause of hydrometrocolpos is distal vaginal bstruction. Hydrocolpos may lead to obstructive uropathy through compression of the lower urinary tract. Usually it presents as lump in suprapubic area or even up to upper abdomen. Congenital hydrometrocolpos is a rare event with an incidence of about 0.006 % [5].

Case Report-

Twenty one day old female child presented in emergency with fever, and difficulty in micturition. She was passing small amount of urine with excessive cry. Antenatal history was normal. She was born by normal delivery with normal cry, tone, and activity at birth. Her birth weight was 2.4 kg. Antenatal sonography was normal. Baby was examined carefully. There was definite lump in suprapubic region. Lump was soft and cystic on palpation. On perineal examination no vaginal opening was seen. There was white translucent membrane bulging at the place of vaginal opening. Urethral opening was pushed anteriorly due to bulging membrane. Anus was normal in size and position. Baby was catheterized immediately with much difficulty. Blood investigation showed hemoglobin of 10 mg/dl. Total leucocytes were slightly raised with normal platelet counts. Kidney function test was within normal limit. Ultrasound abdomen showed well defined anechoic collection with internal echoes of volume measuring 210 cc arising from pelvis and extending behind bladder up to upper abdomen suggestive of hydrocolpus. There was no hydronephrosis or hydro ureter. As this was a case of Hydrocolpos surgery was planned. Under general anaesthesia baby was placed in lithotomy position. Hymenotomy was done cruciate fashion. Large amount of whitish fluid came out after opening the hymen. The fluid was collected and was sent for routine examination. The protein content was 2.9 gm/dl and sugar 21mg/dl . There was mixed inflammatory cells like lymphocytes, neutrophils, macrophages. Baby was discharged without any complication.

DISCUSSION-

Hydrocolpos or Hydrometrocolpos is very rare in neonatal period. This develops due to accumulation of cervicovaginal fluid inside vagina (hydrocolpus) or it can involve uterus also (Hydro metrocolpos). The most common cause is imperforate hymen. It is due to failure of partial resorption of this membrane during the embryonic development. The incidence imperforate hymen is 0.0014–00.1 % in full-term new-borns [6, 7].

Other important causes are vaginal atresia, common cloaca etc. The fluid accumulates gradually due to secretions of uterocervical glands by the influence of maternal estrogen. The accumulated fluid is whitish in colour and semi viscous in nature. But some time it may become hemorrhagic due to estrogen withdrawal as it is as called as neonatal menstruation. The fluid accumulated in hydrometrocolpos is of two types in neonates and infants. Type 1 – mucus secreted by cervicouterine glands due to influence of maternal estrogen. Type 2 - Urine secondary to urogenital and cloacal malformations. [8]. Imperforate hymen present as bulging membrane at vaginal opening. There is feeling of fluid inside vagina on palpation. Urethral opening is separate and may not be visible due to bulging hymen. Apart from imperforate hymen, other causes are urogenital sinus and common cloaca. There is single opening of urethra and vagina in urogenital sinus. In common cloaca only one opening is present through which baby is passing urine and stool.

On the basis of obstruction level and severity of malformation hydrometrocolpos is classified in to five types-- Type I (imperforate hymen), type II (vaginal septum), type III (distal vaginal atresia), type IV (vaginal atresia with persistent urogenital sinus), and type V (vaginal atresia with cloacal anomaly).[9].

Ultrasound is very useful tool to diagnose Hydrocolpos or hydrometrocolpos. But MRI is necessary in cases of urogenital sinus or common cloaca. The treatment of imperforate hymen is hymenotomy in cruciate fashion. But in urogenital sinus in which vagina is hugely dilated abdominal vaginostomy is required. Similarly in common cloaca surgery is complicated and is done as staged procedure. Careful perineal examination is utmost important in cases of Hydrocolpos.[10]. Early diagnosis and surgical intervention can save the baby from this rare condition and its complications.

CONCLUSION-

Hydrometrocolpos in infants is a rare condition. This can present as intraabdominal mass, urinary retention, bulging hymen or gastrointestinal symptoms like constipation. Careful clinical examination of perineum and Sonography of abdomen makes the diagnosis easy. Imperforate hymen is the most common cause in neonates but other causes like urogenital sinus, common cloaca must be ruled out before surgical planning. Cruciate hymenotomy is definitive treatment for imperforate hymen.

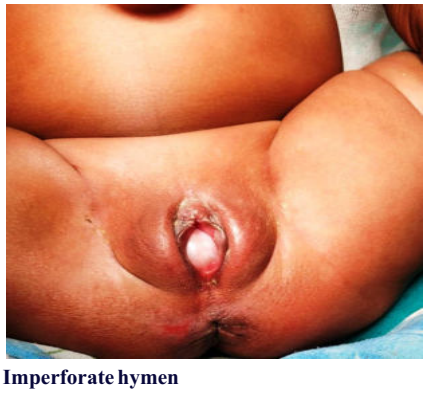

Figure 1- Imperforate hymen

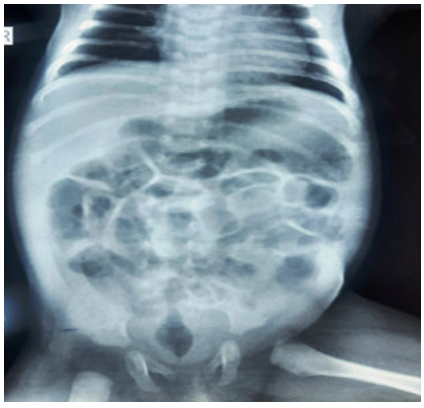

Figure 2— X ray abdomen

Figure 3— Aspirated fluid

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