Early Diagnosis and Successful Treatment of Congenital Huge Hydrometrocolpos Secondary to Low Transverse Vaginal Septum with Obstructive Symptoms

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Abstract: Obstructive congenital anomalies of the female reproductive tract are rare and usually noticed during adolescent period for failure to see menses with cyclic abdominal pain, abdominal mass and local compressive symptoms. It is very rare for such cases to be symptomatic during early childhood from collection of mucous. Congenital hydrometrocolpos (an accumulation of watery fluid in the uterus and vagina) that occurs during fetal period is a very rare condition, only with some case reports. The diagnosis is challenging and usually made late which delays the management resulting in poor outcome. We present a case diagnosed with huge congenital hydrometrocolpos secondary to low transverse vaginal septum using ultrasound by experienced radiologist and meticulous genital examination in a 5 day old neonate who had abdominal distention and difficulty to pass urine since birth where incision of the septum transvaginally and drainage of the fluid was done to relieve symptoms with successful outcome.

Keywords: Congenital (Hydrometrocolpos), Transverse Vaginal Septum, Fetal Cystic Abdominal Mass, Neonatal Abdominal Mass with Obstructive Uropathy

1. Introduction and Literature Review

Congenital anomalies of the female reproductive system are rare conditions which arise from failure of fusion of the mullerian duct or failure of resorption. Obstructive genital tract anomalies usually manifest after age of menstruation with cyclic abdominal pain, lower abdominal swelling and local urinary or rectal compressive symptoms from the hematocolpometra. [1] Rarely they can be manifested in childhood from collection of mucous in the vagina and present with compressive symptoms. Hyperstimulation of the cervical glands by maternal hormones during fetal and early neonatal period could result in production of excessive cervical discharge and accumulation fluid in the vagina and/ or uterus giving a condition called hydrometrocolpos. Congenital hydrometrocolpos which usually occurs from imperforate hymen and rarely from distal vaginal atresia is a very rare condition with significant diagnostic challenge resulting in late diagnosis which delays management and increases mortality. [2] Antenatal diagnosis needs high index of suspicion by experienced radiologist using an ultrasound or MRI. Meticulous neonatal evaluation could help early diagnosis and treatment of such cases. The aim of treatment is distal vaginal drainage, which can be achieved by a perineal procedure in most cases. Laparotomy is indicated only in cases of high vaginal atresia, which require a vaginal pull-through procedure. [3]
2. Case Report

2.1. History

A 5 day old 3.5 kg female neonate born from a 28 years old primipara lady at gestational age of 38 weeks and 7 days delivered spontaneously through vagina after 12 hours of labor with an Apgar score of 8 & 9 in Gondar university hospital, North west Ethiopia, was admitted to NICU with abdominal distention. She had failure to pass urine for 3 days and difficulty of defecation for which she was catheterized. But despite passing urine through the catheter there was no decrement in the abdominal distention. An abdominal ultrasound was done by an experienced radiologist and reported to have hydrometrocolpos for which gynecologic consultation was made. In the last ANC visit after an obstetric ultrasound was done the mother was told to have a fetus with distended bladder due to possible outlet obstruction with no further evaluation.

2.2. Physical Examination

She is healthy looking with no gross anomaly or dysmorphic feature. The Vital signs are normal. She has grossly distended abdomen with visible veins draining upwards, and a mobile and non tender cystic abdominopelvic mass reaching to the level of umbilicus (figure 1). The anus is patent with the mass felt down to the perineum through it.

She has a normal female type external genitalia, annular hymen. A low transverse vaginal septum is seen bulged during straining for defecation.

2.3. Investigations

U/S = Both kidneys are have normal size and echo pattern with no hydronephrosis. Empty urinary bladder, hugely distended vaginal vault with echodebrinous fluid extending to the endometrial uterine cavity effacing the cervix to 6.2 cm. (10.4 cm by 5.8 cm) with an ultrasound diagnosis of hydrometrocolpos 2o to imperforate hymen ddx distal vaginal agenesis.

Trans perineal ultrasound = distance from perineum to the mass is 0.5 cm.
2.4. Diagnosis

Abdominopelvic mass secondary to congenital hydrometrocolpos secondary to low transverse vaginal septum with compressive urinary and bowel symptoms.

2.5. Treatment

Consent was taken from the mother, under anesthesia urethra was catheterized, the transverse septum grasped at two sites with artery forceps and opened. About 250 ml of thin fluid was drained, #12 Folley catheter was inserted for continuous drainage and to prevent closure for three days.

3. Outcome and Follow up

She started passing urine and stool without difficulty. On third post procedure day transabdominal ultrasound was done showing collapsed thin and long uterus with no fluid in it. Patient discharged with advices for possible evaluation when adolescent. Analysis of the fluid showed no organism.

4. Discussion

Hydrometrocolpos though a rare condition, the incidence is increasing from time to time because of increased rate of diagnosis. [4] The etiology of hydrometrocolpos is as simple as imperforate hymen to the most severe cloacal malformations. [5] It is a serious condition which can be complicated with compressive symptoms, bilateral hydronephrosis and renal failure and can be superinfected resulting sepsis and death. [6-9] It can be associated with peritonitis from bowel perforation due to compression or fetal ascites. [10, 11] Diagnosis is challenging which delays management. [12, 13] Ultrasound and MRI are useful studies in the diagnosis. [14, 15] The presence of fetal cystic abdominal mass on routine ultrasound scanning should raise the possibility of the problem and MRI should be done. [16, 17] In neonates presenting with abdominal masses and compressive urinary or bowel symptoms, hydrometrocolpos should be suspected and radiologic evaluations should be done timely. [18] Difficulty of diagnosis resulted in unnecessary laparotomy and some were identified only after autopsy. [7, 19] Gentle evaluation of the genital tract could easily identify the obstructing membrane especially when it is caused by imperforate hymen, and low transverse vaginal septum. Careful incision and drainage of the fluid is a good option in the management of such cases.

5. Conclusion

Though congenital hydrometrocolpos is a very rare condition with fatal complications, in female fetuses with cystic abdominal mass and in neonates with abdominal mass and obstructive features, it should be strongly considered. An ultrasound by experienced radiologist with meticulous genital evaluation could be enough in resource limited areas to early diagnose the problem. Timely identification and surgical treatment with incision of the obstructing septum transvaginally is a simple and life saving procedure.
References

[1] Skinner B, Quint EH. Obstructive Reproductive Tract Anomalies: A Review of Surgical Management. J Minim Invasive Gynecol. 2017 Sep - Oct; 24 (6): 901-908. doi: 10.1016/j.jmig.2017.04.020. Epub 2017 May 5.

[2] Ekenze SO, Ezegwui HU. Hydrometrocolpos from a low vaginal atresia: An uncommon cause of neonatal intestinal and urinary obstruction. Afr J Paediatr Surg [serial online] 2008 [cited 2019 Jun 30]; 5: 43-5.

[3] Hahn-Pedersen J, Kvist N, Nielsen OH. Hydrometrocolpos: Current views on pathogenesis and management. J Urol 1984; 132: 537-40.

[4] Philemon Ekemenye Okoro, C. Obiorah, and C. E. Enyi ndah. Experience with neonatal hydrometrocolpos in the Niger Delta area of Nigeria: Upsurge or increased recognition? Afr J Paediatr Surg. 2016 Oct-Dec; 13 (4): 163–165.

[5] Ayşenur Cerrah Celayir, Gökmen Kurt, Ceyhan Şahin, Inanç Cici, Spectrum of Etiologies Causing Hydrometrocolpos Journal of Neonatal Surgery 2013; 2 (1): 5.

[6] Ozturk H, Yazici B, Kucuk A, Senses DA. Congenital imperforate hymen with bilateral hydrenephrosis, polyaclactyly and laryngocoele: A rare neonatal presentation. Fetal Pediatr Pathol. 2010; 29: 89–94.

[7] Birkneh Tilahun, Fitsum Woldegebriel, Zenebe Wolde, Henok Tadele, HYDROMETROCOLPOS PRESENTING AS A HUGE ABDOMINAL SWELLING AND OBSTRUCTIVE UROPATHY IN A 4 DAY OLD NEWBORN: A DIAGNOSTIC CHALLENGE, Ethiop J Health Sci. Vol. 26, No. 1 January 2016.

[8] Sajni Khemchandani, Amit Devra, and Sandeep Gupta, An unusual case of urinary tract obstruction due to imperforate hymen in an 11-month-old infant, Indian J Urol. 2007 Apr-Jun; 23 (2): 198–199.

[9] Ekenze SO, Ezegwui HU. Hydrometrocolpos from a low vaginal atresia: An uncommon cause of neonatal intestinal and urinary obstruction. Afr J Paediatr Surg. 2008; 5: 43–5.

[10] I GUPTA AND AJ BARSON. Hydrocolpos with peritonitis in the newborn, J Clin Pathol 1980; 33: 679-683.

[11] Aruna Nigam, Manisha Kumar, Shilpa Gulati, Nigam A, et al. Fetal ascites and hydrometrocolpos due to persistent urogenital sinus and cloaca: a rare congenital anomaly and review of literature BMJ Case Rep 2014. doi: 10.1136/bcr-2013-202231.

[12] Hooi H. Tan, Shung K. Tan, Rajah Shunmugan, Rozman Zakaria, Zakaria Zahari, A Case of Persistent Urogenital Sinus Pitfalls and challenges in diagnosis, Med J, November 2017, Vol. 17, Iss. 4, pp. e455–459, Epub. 10 Jun 17.

[13] Rizwan Ahmad Khan, Hydrometrocolpos Due to Persistent Urogenital Sinus Mimicking Neonatal Aseits, Iran J pediatri, march 2008, volume 18, (No 1), pg 67-70.

[14] Sawhney S, Gupta R, Berry M, Bhatnagar V. Hydrometrocolpos: diagnosis and follow-up by ultrasound—a case report. Australas Radiol. 1990 Feb; 34 (1): 93-4.

[15] Gupta M, Bajwa SS, Gup ta M. Diagnostic dilemmas in management of neonatal hydrometrocolpos: A crucial role of magnetic resonance imaging. Int J Health Allied Sci 2014; 3: 251-4.

[16] Zeki Şahinoğlu, Ayşenur Cerrah Celayir, Mehmet Reşit Asoglu, Nahit Özcan, Diagnostic Difficulties in a Case of Persistent Cloaca with Hydrocolpos Journal of Neonatal Surgery 2012; 1 (4): 55.

[17] Chih-Ping Chen, Yu-Peng Liu, Tung-Yao Chang, Fuu-Jen Tsai, Chen-Yu Chen, Pei-Chen Wu, Teresa Hsiao-Tien Chen, Waseen Wang, PRENATAL DIAGNOSIS OF PERSISTENT CLOACA WITH HYDROMETROCOLPOS AND ASCITES BY MAGNETIC RESONANCE IMAGING IN ONE FETUS OF A DIZYGOTIC TWIN PREGNANCY Taiwan J Obstet Gynecol • September 2010 • Vol 49 • No 3.

[18] B R Nagaraj, Deepashri Basavalingu, Venkatesha Mangadahalli Paramesh, andPannag Desai Kaginella Nagendra. Radiological Diagnosis of Neonatal Hydrometrocolpos- A Case Report, J Clin Diagn Res. 2016 Mar; 10 (3): TD18– TD19.

[19] G. O. RICHARDSON, G. A. SMART, CASE REPORT, HYDROCOLPOS IN AN INFANT, Arch Dis Child, 10.1136/adc.17.89.56, 1 March 1942.