



ORIGINAL RESEARCH PAPER

Pediatrics

IMPERFORATE HYMEN- A FIVE YEAR EXPERIENCE

**KEY WORDS:** Imperforate hymen, hydrocolpos, hydrometrocolpos, hydroureteronephrosis, multicystic kidney

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**ABSTRACT** Imperforate hymen (IH) is an uncommon, but an easily recognizable cause of abdominal pain and lower abdominal swelling. We describe five cases who presented to us in infancy with hydrocolpos and unilateral hydroureteronephrosis. Postsurgical results are excellent.

**Introduction:** This condition was first fully described by Mahoney and Chamberlain in 1940. The incidence is estimated to be 0.05-0.1% [1]. Due to distal obstruction and continued activity of the secretory glands of the vagina and uterus, there occurs swelling of the vagina, known as hydrocolpos, which may extend further up resulting in hydrometrocolpos. This can impinge on the surrounding structures like, urinary bladder, causing urinary retention, ureters, causing hydroureteronephrosis and bowel causing constipation. This can either present from neonatal age group to pubertal age group. In neonates, it presents as hydrocolpos, whereas in puberty, presents as hematometrocolpos.

**Material and methods:** All the cases presenting to us with imperforate hymen were collected by a retrospective review of the case records from January, 2011 to August, 2017. We had five cases of IH during this period, all presented to us in infancy. Three of them presented to us with complaints of lower abdominal swelling, progressively increasing in size and swelling at vaginal introitus (figure 1). The diagnosis was made by external evaluation of the genitalia, which showed the presence of a membrane over vagina. Abdominal ultrasonography showed cystic pelvic mass arising from the pelvis. Kidneys and ureters were normal. The other child presented to us with complaints of excessive crying, lower abdominal mass and visible perineal swelling. The investigations were suggestive of deranged renal function tests, with blood urea of 108 mg/dl, serum creatinine of 1.9 mg/dl, serum sodium, potassium were 132 and 5.8 mmol/litres respectively. Abdominal ultrasound revealed the presence of cystic mass arising from pelvis, along with left sided gross hydroureteronephrosis (figure 2). The fifth case presented to us in neonatal age group (figure 3) as a case of imperforate hymen with anovestibular fistula. The ultrasound abdomen revealed left sided multicystic dysplastic kidney. In all the cases, the hydrocolpos was drained by a cruciate incision over the hymen, which resulted in escape of abundant, yellow, mucoid material. The children did well postoperatively and were discharged on follow up advice.



Figure 1: Imperforate mass in a 3 month child with hypogastric mass.



Figure 2: Imperforate hymen in a one month old child with left sided hydroureteronephrosis



Figure 3: Imperforate hymen in a neonate with anovestibular fistula with left sided multicystic kidney

**Discussion:** Imperforate hymen results due to failure of canalization of the membrane during embryonic development. This has been reported in infancy and even in neonatal age [2]. If this is not recognized early, it presents either as complications related to compression effects or in pubertal age group with cyclical abdominal and pelvic pain along with amenorrhoea [3]. The diagnosis is clinical and ultrasonography is done to rule out other associated conditions. The management includes cruciate incision over the hymen, the postoperative results are excellent. The delay in diagnosis can lead to confusion and the development of hydronephrosis. It can be easily diagnosed during routine neonatal physical examination and can avoid the life threatening complications of renal failure. Familial occurrence of the cases has also been reported [4]. Cases have also been described in literature the association of IH with hydronephrosis [5]. They may be associated with uterine anomalies as well as described by Eksioglu et al [5].

**Conclusion:** The early diagnosis and management of imperforate hymen in newborn can result in improved outcomes avoiding unnecessary complications related to renal failure. USG abdomen should be done to rule out associated renal conditions. The results are excellent.

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