Case Report
A Rare Case of Imperforate Hymen Presenting with Perineal Pain

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Abstract
Introduction: Imperforate hymen is a rare local fusion anomaly of the female reproductive tract and diagnosis can be easily missed. Cyclic lower abdominal pain and amenorrhea are common symptoms in cases left untreated after menarche. Perineal pain may be an unusual presenting symptom of imperfect hymen. In order to avert complications related to delayed treatment, hymenotomy is considered effective management.

Case Report: We herein describe a case of a 13-year-old adolescent girl with an imperforate hymen presenting with lower abdominal and perineal pain. The girl underwent hymenotomy and postoperative period was uneventful. Perineal and pelvic pain relieved instantly after surgical treatment and during follow up her menstrual cycles were regular.

Keywords: Imperforate hymen; Hematocolpometra; Adolescence; Perineal pain

Introduction
The most common congenital anomaly of the female genital tract leading to vaginal outlet obstruction is imperforate hymen. During embryogenesis, a failure in canalization of the caudal segment of the vaginal plate at its juncture with the urogenital sinus leads to imperforate hymen [1]. The incidence is estimated among 0.05-0.1 % of female newborns, although it may occur more frequently [2]. First symptoms may appear during adolescence; hence, the majority of cases pass unnoticed [1]. Cases with prenatal diagnosis via ultrasonography or clinical diagnosis during neonatal period have been also described [3]. Usually, primary amenorrhea is the presenting symptom in most patients. Cyclic pain of the lower abdomen, and hematocolpometra derivative to the accumulated menstrual blood. Atypical signs and symptoms of imperfect hymen have been also reported [4]. We herein present a case of imperfect hymen as a cause of lower abdominal pain and perineal pain.

Case Presentation
A 13-year-old premenarchal adolescent girl presented to our outpatient department complaining of perineal pain and lower abdominal pain that started before 36 hours. She reported loss of appetite due to the pelvic pain. Patient described a feeling of heaviness deep within the pelvis and discomfort in the perineal area with a previously normal passage of stools on a daily base. From past medical history, patient reported several episodes of lower abdominal pain gradually worsened in the past six months, which improved without treatment. General examination of the patient revealed a normal phenotype and well developed secondary sexual characteristics (Stage 4 on Tanner scale). On abdominal examination, suprapubic tenderness was elicited and a mass corresponding to the size of a 13 weeks gravid uterus was palpated. A large mass was detected anteriorly by rectal examination. Examination of the external genital organs, showed a bulging hymenal membrane with bluish discoloration when retracting the labia. Patient’s, white blood cell count was 13.900 K/µL (Neutrophils: 78.9%), hemoglobin was 11.3 g/dL and C-reactive protein was 3.5 mg/L.

Accordingly, patient underwent a transabdominal
ultrasonography; Findings included a normal-shaped uterus and the vagina was all filled up with hypoechoic fluid, indicating hematocolpos. Hence, the diagnosis of imperforate hymen was made. A magnetic resonance imaging took place in order to exclude congenital Müllerian anomalies (Figure 1). The patient was brought to the operating theater for surgery under general anesthesia, after obtaining informed consent from her guardian. A hymenotomy with crucial incision of the hymen took place and approximately 500ml of deep red colored fetid blood evacuated and intravenous antibiotics were administered (Figure 2). The postoperative course of the patient was uneventful and she was discharged on day 2. A follow-up took place six months after treatment. The patient was asymptomatic and she reported regular menstrual cycles.

**Discussion**

We hereby report the second case reported in the international literature of a female adolescent who presented with lower abdominal and perineal pain as an atypical presentation of an imperforate hymen [1]. The collection of blood in the vagina and the uterus is the main cause of the majority of clinical presentations of imperforate hymen after menarche. The most frequent symptoms are cyclic pain of the lower abdomen and symptoms of the genito-urinary system [5,6]. Data from a recent systematic review on imperforate hymen demonstrated that perineal pain was the presenting clinical genitourinary symptom in 0.4% of all cases (1 in 236 patients) [1].

Diagnosis of imperforate hymen is based on clinical examination of the external genital organs. In addition, a transabdominal ultrasonography may reveal a cystic mass in the pelvis corresponding to the dilated vagina-uterus [2]. These cases require monitoring with magnetic resonance imaging in order to determine the thickness of the imperforate hymen and exclude concomitant congenital Müllerian duct anomalies [7,8]. Delay in the diagnosis and treatment of imperforate hymen may cause complications including infection, endometriosis and infertility consequently [9]. Vaginal agenesis and vaginal septum must be eliminated from differential diagnosis achieved. When diagnosis is not confirmed until adolescence, imperforate hymen should be included in the differential diagnosis of girls presenting with pelvic pain and nonspecific symptoms such as perineal pain. Hence, external genital examination should be performed in the beginning evaluation of young female patients complaining for abdominal pain and gastrointestinal or urogenital clinical manifestations. The prognosis of imperforate hymen is favorable, when surgical treatment is performed promptly.

**Informed Consent**

Verbal informed consent was obtained from the patient and her guardian for their anonymized information to be published in this article.

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