



# Imperforate hymen: a rare cause of acute abdominal pain in peripubertal girls. A case report and literature review.

**Peer review status:**

No

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**Article ID:** WMC004802

**Article Type:** Case Report

**Submitted on:**20-Jan-2015, 02:33:08 AM GMT **Published on:** 20-Jan-2015, 12:34:58 PM GMT

**Article URL:** [http://www.webmedcentral.com/article\\_view/4802](http://www.webmedcentral.com/article_view/4802)

**Subject Categories:**OBSTETRICS AND GYNAECOLOGY

**Keywords:**Imperforate; hymen; hematocolpos, hymenotomy; amenorrhoea.

**How to cite the article:**Uzoma OI, Anolue F. Imperforate hymen: a rare cause of acute abdominal pain in peripubertal girls. A case report and literature review.. WebmedCentral OBSTETRICS AND GYNAECOLOGY 2015;6(1):WMC004802

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**Source(s) of Funding:**

The article was exclusively funded by the authors.

**Competing Interests:**

They are no competing interests.

# Imperforate hymen: a rare cause of acute abdominal pain in peripubertal girls. A case report and literature review.

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## Abstract

A 15 year old female presented with severe abdominal pain and distension. However detailed history, physical examination and ultrasonographic findings of hematocolpos and hematometra clarified the diagnosis

## Introduction

Outflow obstruction of the female genital tract may be diagnosed in utero, in early childhood or at puberty.<sup>1</sup> Imperforate hymen ranks as the commonest cause of this obstruction.<sup>2, 3</sup> It is usually diagnosed at puberty when symptoms associated with the menstrual flow obstruction become evident.<sup>2</sup> The presentation can be a varied spectrum, the commoner features being primary amenorrhea and monthly cyclical abdominal/pelvic pain. Less commonly it may present with abdominal distension, acute urinary retention and tenesmus.<sup>3-5</sup> Herein is a case report of imperforate hymen with severe abdominal pain and abdominal swelling.

## Case report

A 15 year African girl presented with severe abdominal pain and poor appetite. History revealed monthly cyclical abdominal pain of two years duration and she had not yet started to menstruate. Physical examination showed a globular abdominal mass extending from the superior border of the pubic symphysis to four centimeters below the umbilicus. The mass was mobile and tender. Pelvic examination revealed a bluish-grey bulge anterior to the anus but posterior to the urethral meatus. Rectal examination permitted palpation of the mass, suggestive of it being the uterus. Abdomino-pelvic ultrasonography showed a markedly enlarged uterus with features of hematocolpos and hematometra. Pregnancy test was negative, her other laboratory investigations included complete blood count with a packed cell volume of 36%, HIV serology was negative, serum electrolytes, urea and creatinine were all within normal limits. She

was catheterized transurethrally and a hymenotomy was done using a simple vertical incision and reflecting the edges with vicryl 0 sutures to prevent refusion. A total of 900mls of chocolate colored fluid was drained during the procedure.

She was followed up over a 6 month period and was having normal menstrual flow lasting for 4 days with a cycle length of 30 days, she had no further complaints.

## Discussion

Imperforate hymen is the most common cause of obstruction of the lower female genital tract.<sup>1, 2</sup> It is still however relatively rare with a prevalence of 0.05-0.1%.<sup>3</sup> Embryologically the hymen is a product of the fusion of the paramesonephric ducts and the urogenital sinus.<sup>4-7</sup> Not many cases of imperforate hymen have been documented on the African continent.<sup>1</sup>

The occurrence of imperforate hymen tends to be sporadic. However familial cases have been documented.<sup>6, 7</sup> Its presentation is a varied spectrum that includes, cyclic abdominal/pelvic pain, abdominal distension, amenorrhea (primary or secondary), urinary outflow obstruction, constipation, tenesmus, edema of the lower limbs and a bluish bulging hymen.<sup>7-9</sup>

Diagnosis is most commonly made at puberty as these girls develop accumulation of menstrual blood within the vagina and occasionally within the uterus.<sup>7</sup> The age of presentation being between 11-16 years in a study by Liang et al.<sup>10</sup> The patient in this case was diagnosed within this age range. It may also be diagnosed in utero (sonographically), in the neonate/infant and in early childhood as well.<sup>6, 7</sup>

Complications may arise if the patient presents late. These complications include pyocolpos, endometriosis, renal failure and ruptured hematosalpinx.<sup>11</sup>

Management of this disorder revolves around overcoming the outflow obstruction and is achieved mostly by surgical intervention using hymenotomy. Various incisions have been used and documented in the literature, they include X shaped, T shaped, cruciform, cyclical and simple vertical incisions.<sup>7, 11</sup> It is important to factor in certain inherent cultural views that place a very high value on the perceived

intactness of the hymen.<sup>3</sup>

Following appropriate treatment the long term outcomes are good with recurrence being rare.<sup>11</sup>

## Conclusion

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For peripubertal girls whom are yet to start menstruating and have cyclical abdominal pain with or without other symptoms, it is imperative to consider the possibility of imperforate hymen. The surgical approach should be guided by sound gynecological practice in addition to consideration of prevailing strong cultural norms/influences

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## Contribution of authors

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All the listed authors participated in the management of the case and were all involved in all the steps that led up to the final article.