Imperforate Vaginal Septum with Haematocolpos

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IMPERFORATE VAGINAL SEPTUM with haematocolpos is an uncommon condition. Warner and Mann (1955) gave an incidence of 0.02 per cent when he found 5 cases out of a total of 20,963 gynaecological admissions. The incidence as given by Rosenthal and Block is 1 in 1,000-2,000 of total gynaecological admissions. This article reports on 7 cases seen in the University Hospital over a period of 6 years (1968-1973).

Clinical Features (See Table I)

The patients presented at about a year or two after the age of normal menarche, namely, 13 to 16 years.

Lower abdominal pain appear to be the most common symptom in a review of literature. Of the cases seen in the University, one patient had severe colicky lower abdominal pain. Less severe abdominal pain was seen in 4 other patients. One complained of a dull low backache.

Urinary symptoms seem to be the most common symptoms in the present series of patients. In 5 of the cases seen, retention of urine was the main presenting symptom, ultimately causing them to seek treatment. Frequency of micturition and dysuria were the other common urinary complaints.

An awareness of an abdominal swelling is a common presenting symptom but this did not seem apparent in the patients under review even though the haematocolpos in some of these patients were fairly large and prominent.

Bowel symptoms are usually common but not as main presenting symptoms. Constipation were seen in 3 of the patients and 1 had tenesmus.

Patient (T.L.L.) Case No. 2 was rather unusual. She had complaints of regular menstrual bleeding and dysmenorrhoea for the 6 months prior to being seen. She was admitted with the main complaint of urinary retention. Examination under anaesthesia revealed a fusiform mass 5 cm. x 5 cm. situated on the right side of the vagina. A firm tubular cervix could be seen to the left of this mass (see diagram). The diagnosis was of unilateral haematocolpos due to uterus didelphys and a partial double vagina with imperforate septum (Chew et al, 1970).

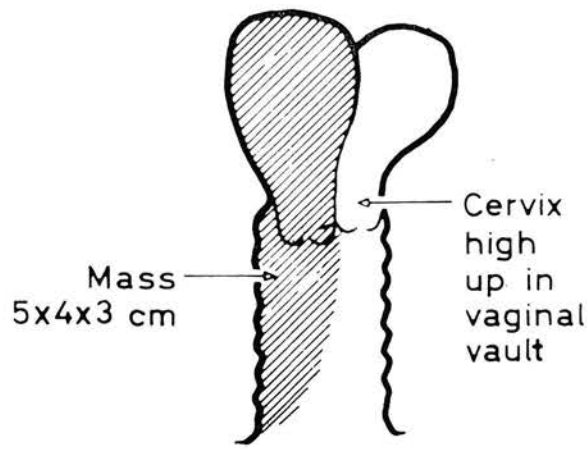

Fig. 1
Coronal Section of uterus and vagina.

Clinical Presentations of 7 Cases of Cryptomenorrhoea

No.	Name	Age	Main Complaints	Other Complaints	Physical Signs			Case Referred in as
					Abdomen	Genitalia	Rectal	
1.	L.S.W.	13	Colicky abdominal pain for 2 days	Dysuria for 2 days	Regular, suprapubic cystic mass 24 wks size	Tense, bulging membrane. Distinct hymenal ridge	Tense, cystic mass anteriorly	Ovarian cyst
2.	T.L.L.	13	Urinary Retention	Dysmenorrhoea Tenesmus Frequency of micturition for 1 month	Bladder distended to 16 wks. size. 400 ml. urine at catheterization No abdominal mass	Fusiform mass 5 cm & 5 cm. in the right part of vagina. Cervix to the left.	Tender mass anteriorly	Ovarian cyst, Pregnancy Had appendicectomy 3 mth. ago
3.	L.C.H.	14	Backache for 6 months		Cystic, regular mass, 22 wks. size	Tense, bulging, bluish membrane at introitus. Distinct hymenal ridge		Abdominal tumour
4.	L.K.T.	15	Urinary retention	Periodic paraumbilical discomfort for 1 year. Constipation for 2 days	Cystic suprapubic mass 20 wks. size.	Distended, bluish membrane covering vaginal orifice. Distinct hymenal ridge	Cystic mass anteriorly	Imperforate hymen
5.	W.M.	13	Urinary retention followed by frequency (overflow incontinence)	Dysuria – 1 mth. Suprapubic ache Constipation	Cystic, immobile mass arising from pelvis	Thick bulging membrane at introitus	Distended vagina with small uterus	Imperforate hymen
6.	L.A.K.	16	Urinary Retention	Dysuria Suprapubic pain Constipation	Cystic, suprapubic mass 16 wks. size	Tense, bluish membrane across lower vaginal orifice		Imperforate hymen
7.	C.T.H.	15	Urinary Retention	Lower abdominal pain – 3 days	Tense, cystic swelling 22 wks. size	Bulging bluish membrane at introitus	Cystic mass anteriorly	Imperforate vagina

Physical Signs

Secondary sexual characteristics were seen in all 7 patients. Following catheterization of the bladder, when retention of urine was the presenting symptom, a cystic swelling arising from the pelvis can usually be palpated as was seen in 6 of the patients. Very occasionally, the uterus may be felt perched on the haematocolpos or the dilated tubes of haematosalpinx may be felt (Tompkins, 1939).

Examination of the genitalia usually revealed a tense, bulging, bluish membrane at the introitus. The colour depends on the thickness of the membrane. This may not be obvious if the vaginal obstruction is higher up in the vagina. The hymenal ridges were quite often seen distinct and stretched out around the rim of the membrane. Often, the distended membrane caused gaping of the labia.

A rectal examination was done in most cases and was usually necessary to confirm the presence of a cystic mass filling the sacral hollow.

Discussion

Quite often imperforate vaginal septum is labelled "imperforate hymen". This is because of controversy over the development origin of the vaginal septum. Blair-Bell (1911, 1912) showed that all such membranes are not imperforate hymen and that imperforate hymen are far less common than a transverse septum at a higher level in the vagina. Blair-Bell suggested that they resulted from non-fusion between the portions of the vagina developed from Mullerian elements and the urogenital sinus. Koff (1933) believed that the vaginal septum resulted from arrest of canalisation in that part of the vaginal part derived from the sino-vaginal

bulbs of the urogenital sinus. He regarded the hymen as being totally derived from the sinus epithelium. Kanagasutheran and Dassanayake (1958) suggested a possible theory which may satisfactorily explain all types of vaginal septae and imperforate hymens encountered. They postulated that abnormal proliferation of the surrounding mesoderm invaded the vaginal plate and fused in the substance to occlude it in various ways; a mesodermal sheet with its adjacent epithelial layer may then persist as a vaginal septum. They also showed that the membranous obstruction at the vaginal orifice is rarely an imperforate hymen.

Diagnosis is often not difficult if the condition is kept in mind and local examination is not omitted. Diagnosis of haematoclopos due to imperforate septum seems obvious when an abdominal mass is felt with a tense, bulging membrane seen on separating the labia. Failure of performing a simple inspection of the vulva had led to misdiagnosis as in 3 of the 7 cases under review and in unjustified laparotomy in one of the patients. This condition needs to be differentiated from various conditions such as pregnancy, tuberculous, peritonitis, acute or subacute appendicitis, ovarian cyst and pelvic kidney. Three of the patients were referred in as possible ovarian cyst, abdominal tumour and a pregnancy. One of them, T.L.L. patient No. 2 had an appendicectomy done a few months before admission because of symptoms and signs suggestive of an acute abdomen.

Diagnosis is more difficult in cases of vaginal agenesis and high obstruction, when rectal and vaginal examination may not disclose the distended part of the vagina. In these cases, instillation of radio-opaque material into the bladder with radiography may be useful or a laparotomy may be required (White, 1966).

The main line of treatment is excision of the membranous obstruction under strict aseptic conditions with prophylactic antibiotics as blood is an excellent medium for bacterial growth. Too often, a simple incision is performed and though this allows drainage, re-stenosis is common. Adequate resection of the septum is necessary, consisting of a cruciate incision followed by excision of the four quadrants of the septum. The edges of the incision are sutured with continuous locked catgut sutures to secure haemostasis. The retained menstrual blood is allowed to drain spontaneously without any abdominal pressure, drains or packs as these predispose to sepsis. Vaginal examination should not be done in the early post-operative period. A sterile pad should always be worn. Close observation would be necessary to detect any evidence of sepsis. Douching, tub-bathing and swimming must be avoided until after the first next period. Jeffcoate (1967) advocated vaginal examination after 2 menstrual periods to assess the state of the uterus and fallopian tubes. If residual haematosalpinges are discovered, laparotomy with a view to conservative surgery is advisable. Haematometra scarecly seems to be a realistic clinical entity, the thick uterine walls permitting very little blood to collect therein. Cases in which the agenesis of the vagina is considerable may need a combined abdomino-perineal approach to adequately drain the menstrual blood.

Congenital anomalies of the urinary tract are often associated with haematocolpos, usually with high membranous obstruction or vaginal atresia. The commonest anomaly appears to be the absence of a kidney, as was seen in one of the patients under review, T.L.L. Case No. 2, at intravenous pyelogram. She had absent right kidney with a slightly enlarged normal functioning left kidney. Other anomalies seen in other series were pelvic kidneys, horse-shoe kidneys, duplications and malformations of the ureters and bladder anomalies (Bryan et al, 1949; Ball & Douglas, 1949).

The urinary tract may be affected by back-back-pressure changes. Hydroureters and hydronephrosis have been reported. Dewhurst (1963) recorded a fatal case of ascending urinary tract infection consequent on the obstruction.

In the past, many fatalities have been recorded as a result of fulminating sepsis. Tompkins (1939), in his review of 113 cases of haematocolpos, reported 6 deaths and 1 severe pelvic infection. However, such cases are uncommon in this modern era of antibiotics and asepsis. In general, full restoration of functions of the genital tract is the rule. Normal menstrual flow is established, as was seen in all our patients.

Summary

1. The main clinical features of 7 cases of vaginal septum with haematocolpos are presented.
2. The aetiology of the membranous obstruction is discussed.
3. Diagnosis is not difficult if the diagnosis is kept in mind and a simple vaginal examination is done.
4. Treatment consists of an adequate excision of the obstructing membrane.

Acknowledgement

Thanks to Professor T. A. Sinnathuray for reviewing the article, the Medical Illustration Department of the University of Malaya for the diagram, and to Mrs. Ivy Phang for typing the manuscript.

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