

Quadro-Cornuate Uterus

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ABSTRACT

Congenital malformations of the female genital tract are a group of miscellaneous deviations from normal anatomy with diverse spectrum. Mullerian anomalies are thought to be present in 0.5% of female population. Three quarter of women remain asymptomatic, the remaining quarter presents with a variety of symptoms including primary amenorrhea, cyclical pain, severe dysmenorrhea, pelvic mass, ectopic pregnancy, infertility and recurrent miscarriages. The American Fertility Society (AFS) classification has been the most widely used classification for categorizing these abnormalities. Recently, European Society of Human Reproduction and Embryology (ESHRE)/European Society for Gynaecological Endoscopy (ESGE) proposed another classification system of female genital anomalies which provides a comprehensive description and categorization of almost all of the currently known anomalies. This case report describes a 23-year, married, parous woman with severe dysmenorrhea. Workup revealed a right adnexal mass which preoperatively was consistent with non-communicating horn(s) of uterus. Peroperatively a new entity, a uterus with four cornua, was seen.

Key Words: Mullerian anomalies. Classification. Quadro-cornuate uterus.

INTRODUCTION

Congenital uterine anomalies result from abnormal fusion, formation or resorption of Mullerian ducts during fetal life.¹ A large analysis of all studies in the period from 1950 to 2007 suggests that the prevalence of congenital uterine anomalies is 6.7% in general population and 7.3% in infertile population.² The more accepted classification system, that of the American Fertility Society (AFS), is associated with limitations in effectively categorizing anomalies of female genital tract.³ Many cases present in literature cannot be explained based on this system thus underlying the need for a new and updated clinical classification system.⁴

This report describes a quadro-cornuate uterus, which is another new entity.

CASE REPORT

A 23-year female, married for 4 years, para 1+0, with regular periods, moderate flow and severe dysmenorrhea since menarche, was admitted through OPD. She reported having temporary relief after taking NSAIDS but never became symptom-free. Her only pregnancy was 3 years ago, without any fertility treatment; she was not on any contraceptives but had not conceived in the last 3 years, despite regular sexual intercourse.

Examination on admission revealed tenderness all over abdomen; and per vaginal examination showed a mass of 14 weeks size. The mass was felt to be attached to uterus with restricted mobility. Rest of the examination was unremarkable.

Ultrasound and MRI of pelvis were advised. MRI showed a large mass in pelvis measuring 8.0 x 7.4 x 6.8 cm. Mass was in right adnexa causing tilting and displacement of uterus to the left side. Endometriosis was suspected. After counselling and discussion with the patient, decision of laparotomy was taken. General anesthesia fitness was taken and laparotomy was arranged after taking consent from patient and arranging blood.

Abdomen was opened through Pfannenstiel incision. A mass of 14 weeks was found attached to right side of uterus (Figure 1). Another mass of about 3 - 3.5 cm was felt and seen on right side of cervix; and yet another mass of about 4 - 4.5 cm was seen on posterior surface of uterus. An incision of 6.0 cm was given in the anterior wall of mass and 100cc of chocolate colour blood was aspirated with syringe. Deep incision was given, approximately 80cc blood was aspirated. No cyst wall was found and the mass had a non-endometriotic look. Cavity of about 8 - 10 cm felt which was non-communicating. Uterine sound was passed P/V and it was felt going into the left cornua of the uterus through single cervix. Incision on posterior mass or the third cornua was given and 10 - 15 cc chocolate colour blood was drained. It was also non-communicating and no cyst wall was found. Then visceral peritoneum was displaced downward and anterior cornua was dealt with by giving incision and draining 15 ml of chocolate colour blood; this cavity was also non-communicating. Hemisection of right large horn of uterus was done after clamping, cutting and ligating the pedicle. Posterior horn was

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Figure 1: Mass attached to right side of uterus.

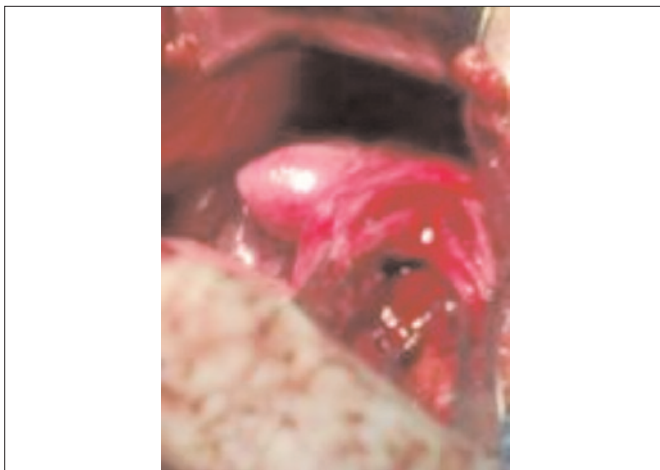


Figure 1: Mass on right side of cervix with blood draining.

stitched in 2 layers by taking deep stitches to obliterate cavity. Anterior horn was stitched back. Hemostasis was secured. Saline wash was done. Abdomen was closed. Specimen was sent for histopathology. Patient was discharged on the fifth postoperative day. She had a quick recovery and symptoms were relieved. Histopathology report of specimen showed functional uterine horns.

DISCUSSION

Mullerian duct anomalies have been separated into many classifications over the years, but perhaps the most well known separates these into classes that demonstrate similar clinical manifestation, treatment and prognosis.⁵ Although prevalence ranges from 0.16 - 10% overall, a MEDLINE search showed that the prevalence of uterine anomalies subtypes in general population was approximately 0.5%. The prevalence of subtypes was 7% for arcuate, 34% for septate, 39% for bicornuate, 11% for diadelphus, and 5% for unicornuate, with 4% hypoplastic and other forms.⁶

The diagnosis of Mullerian abnormalities can be made *via* ultrasonography. However, MRI is more specific for evaluation of presence or absence of functional endometrium. Diagnostic laparoscopy remains the gold standard to diagnose Mullerian anomalies.

It is generally considered that presence of non-communicating cavity rudimentary horn carries increased risk of endometriosis and cornual pregnancy. It is difficult to truly estimate the incidence of such complications as the data available is in the form of case reports and they usually present as surgical emergencies.

This case had 4 cornua, quadro-cornuate uterus, a scenario which has not been reported in literature to date. Classification regarding these anomalies is still evolving.

Developments in 3-D ultrasonography and MRI are helping to improve the ability to describe and diagnose female reproductive tract anomalies.⁷ New complex malformations, which do not fall into the recognized American Society of Reproductive Medicine (formerly American Fertility Society) classification system, are being seen. These findings raise issues regarding embryologic development, upon which this classification is primarily based.⁸ A new and improved classification system has been put forth by European Society of Human Reproduction and Embryology (ESHRE)/European Society for Gynaecological Endoscopy (ESGE).⁹ The CONUTA (congenital uterine anomalies) ESHRE/ESGE group conducted a systematic review of the literature to examine if those types of anomalies that could not be properly classified with the AFS system could be effectively classified with the use of the new ESHRE/ESGE system.¹⁰

To avoid serious complication, early diagnosis and excision of rudimentary horn(s) is of utmost importance. If facility and expertise are available then laparoscopic excision should be offered, especially to the young woman as it is less morbid and cosmetically more acceptable.

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