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A RARE CASE OF UNICORNUATE UTERUS WITH NON-COMMUNICATING RUDIMENTARY HORN

Surgery

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ABSTRACT

Mullerian duct anomalies result from the arrested development, abnormal formation, or incomplete fusion of mesonephric ducts. unicornuate uterus with rudimentary horn is a rare MDA of female genital tract. These patients present with dysmenorrhea, dyspareunia, and lower abdomen pain because of endometriosis. we report a rare case of a unicornuate right uterus with non-communicating left horn in a 15-year-old girl. She was presented with severe dysmenorrhea. Magnetic resonance imaging revealed a normal uterus on the right side and non-communicating rudimentary horn on left side with hematometra. She underwent laparotomy that showed a right unicornuate uterus with normal cervix and non-communicating rudimentary horn on left side containing functional endometrium with altered blood in cavity. Resection of the left rudimentary horn was done. Both ovaries were preserved. At 9 months follow up, pain subside completely and patient doing well. we are presenting a case of dysmenorrhea and hematometra in a young patient with rudimentary non communicating horn with functional endometrium. Rudimentary horn should be kept as a differential diagnosis in young patients with dysmenorrhea and pelvic pain.

KEYWORDS

Mullerian Duct Anomalies, Unicornuate Uterus, Rudimentary Horn, Dysmenorrhea

INTRODUCTION

Rudimentary horn of uterus is one of the rarest gynecological anomalies. This anomaly is a rare type of Mullerian duct malformation and results from the defective fusion of the malformed duct with the contra-lateral duct [1]. The incidence of these congenital uterine anomalies is 1/200 to 1/600 in fertile population. The incidence of rudimentary horn is very very rare (1:100,000) [2]. These anomalies may present with gynecological complications such as primary infertility, endometriosis and hematometra, urinary system anomalies and obstetric problems such as recurrent abortions, malpresentations, IUGR and premature births can occur.[3]

CASESTUDY

A 15-year-old, unmarried girl, presented in out patient department with left lower abdomen pain and dysmenorrhea. She had menarche at age of 13 and had severe dysmenorrhea since age 14. Her menstrual cycle was 30 days and her menstrual period last about 4-6 days with a normal amount of bleeding. She had no history of weight loss, fever, vomiting, altered bowel habit and Dysuria. No major systemic illness was detected. She had no history of previous surgical intervention and medical illness. On general examination her blood pressure was 110/74 mm Hg, heart rate 78 per minute. her secondary sexual characters were developed well. On abdominal examination mild tenderness present in left iliac fossa. On pelvic examination vulva appears normal with in tacthy men.

Her routine blood tests and urine test were normal. The ultrasonography of abdomen reveals a pelvic mass in the left adnexal region with no renal system anomalies. Magnetic resonance imaging (MRI) pelvis revealed normal uterus on right side, anormal right ovary with non-communicating rudimentary horn on left side with hematometra, endometrial cavity approx. 39 3544mm in size (according to American fertility society Type IIb)(**figure1**).

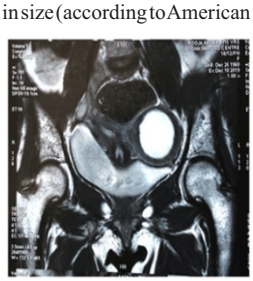

Figure 1. MRI image showing normal uterus on right side (green arrow) and rudimentary horn on left side (red arrow)

The patient and her parents were counselled for surgery and consent was taken for surgery. Abdomen was opened through low transverse incision (Pfannenstiel incision). Laparotomy finding were as follows: A 66cm left noncommunicating uterine horn(**figure2a**).

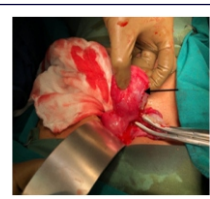

Figure2a: intraoperative image showing left rudimentary horn of uterus

The right and left ovaries were visualized and appeared grossly normal. Cervix appears normal. Left noncommunicating horn was resected. Good hemostasis was achieved. Cut section of rudimentary horn showed small cavity filled with altered dark blood (**figure 2b**). Post op period was uneventful. Patient discharged on third post op day. Histopathologic examination of uterine horn confirmed the diagnosis of its functional end ometrium. At 9 months follow up she was doing well.

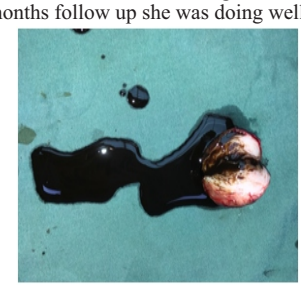

Figure 2b: Cut section of rudimentary horn showing altered blood in the cavity

DISCUSSION

Rudimentary uterine horn is a rare clinical condition resulting from congenital malformation of female genital tract during embryogenic development. Mullerian duct anomalies (MDA) represent a variety of congenital anomalies resulting from developmental arrest, abnormal formation, or incomplete fusion of the mesonephric ducts. The reported incidence of uterine anomalies in fertile population is around 3.2% [2]. Unicornuate uterus with rudimentary horn is a rare type of Mullerian duct malformation representing only 1-2% of congenital Mullerian anomalies [4]. American fertility society classification consists 7 classes of Mullerian anomalies[5].

I. Uterine agenesis
II. Unicornuate uterus
III. Didelphus uterus
IV. Bicornuate uterus
V. Septate uterus
VI. Arcuate uterus
VII. DES related anomalies

Class II divided into four subgroups according to American Fertility Society classification of Mullerian anomalies: (IIa) rudimentary horn with cavity communicating to Unicornuate uterus, (IIb) with cavity non-communicating, (IIc) with no cavity, (IId) with no horn [5]. Type IIb is the most common and clinically significant type. A fibrous or fibro muscular band usually connect the horns, but in 80 -90 % of cases there is no communication.

Usually this condition is asymptomatic due to lack of functional endometrium [6]. However, when the rudimentary horn is lined with functional endometrium, the resulting obstructed menstrual blood flow may cause severe cyclic pain shortly after menarche [7]. According to retrograde menstruation theory it is thought to initiate and potentiate endometriosis in women with non-communicating uterine horn. Presence of endometriosis in these cases supports the retrograde menstruation theory. These cases of endometriosis pain are usually severe and results in severe dysmenorrhea, chronic pelvic pain and dyspareunia [8]. Hematometra in these cases causes distension of uterine horn and pain. Pregnancy of non-communicating rudimentary horn is another problem of rudimentary horn [3]. Rudimentary horn pregnancies ruptures frequently due to thin myometrium of rudimentary horn [3]. The pregnancy of non-communicating rudimentary uterus can be explained by transperitoneal migration of sperm. Although this is uncommon, these pregnancies may lead to serious complications.
MRI is superior to Ultrasonography (USG) and computerized tomography (CT) in the delineation of congenital anomalies and tumors. MRI has lot of advantages, being multi-planar with more optimal tissue contrast and tissue characterization with no radiation hazards [9]. MRI is best diagnostic tool for MDA and has been suggested as a valuable alternative to laparoscopy and hysterosalpingography for assessment of MDA [10].

Surgical excision of non-communicating rudimentary horn with functional endometrium, either laparoscopically or by laparotomy is the treatment [11]. It can prevent complications of rudimentary horn like endometriosis, ectopic pregnancy and rupture of horn due to pregnancy. In our case, excision of horn resulted in relief of dysmenorrhea complaint. Younger women in as in our case, the rudimentary horn must be excised because the surgery removal will prevent possible endometriosis development, pregnancy in horn and rupture of horn [12]. This will also prevent hematometra causing lump in abdomen, torsion and infertility.

CONCLUSIONS

Rudimentary horn of uterus is one the rarest Mullerian duct anomaly. Young female with dysmenorrhea with adnexal mass, then rudimentary horn with functional endometrium should be kept as differential diagnosis. These patients should be managed by surgical excision by expert surgeon to preserve fertility and prevent complication in life of patient.

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