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Case Report

Laparoscopic resection of functional non communicating rudimentary horn of uterus in adolescent girl

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ABSTRACT

Unicornuate uterus with rudimentary horn is a rare type of mullerian anomaly associated with many obstetrical and gynaecological complications. The incidence is approximately 1:100000. Author reports a case of 18-year-old unmarried female with unicornuate uterus with non-communicating and functional rudimentary horn presented with chief complaint of refractory dysmenorrhea.

Keywords: Refractory dysmenorrhea, Mullerian anomaly, Unicornuate uterus, Rudimentary horn of uterus

INTRODUCTION

Uterine malformations are the results of abnormal mullerian duct development-fusion, canalization and septal defects.¹ Unicornuate uterus with a rudimentary functional horn is one such anomaly of uterus occurring due to fusion defects.² It belongs to class-II mullerian anomalies according to classification by American fertility society.³ The incidence is approximately 1:100000. A close embryonic relationship exists between development of urinary tract and reproductive organs. renal tract malformations may be simultaneously present in women with Mullerian duct malformations.⁴

Patient usually remain asymptomatic due to the absence of functional endometrium in most of the cases.⁵ If the rudimentary uterine horn has an endometrium lined uterine cavity and doesn't communicate externally then the signs and symptoms of obstructed menstruation appears, as soon as menarche begins.⁶ It will be associated with severe congestive dysmenorrhoea diagnosed in pubertal age. Other complications may be abdominal lump, chronic

pelvic pain, infertility, endometriosis, adenomyosis and ectopic pregnancy in rudimentary horn.⁷

CASE REPORT

The 18 years old, unmarried female presented to outpatient department of Mata Kaushalya government hospital Patiala with chief complaint of severe congestive dysmenorrhea for 7-8 months which has been gradually increasing in intensity. She attained menarche at 13 years of age. Her previous menstrual cycle length was 36-38 days, bleeding lasted for 3-4 days with normal amount not associated with dysmenorrhea. Her last menstrual period was 2-6-2023. Pain was not relieved on any oral and injectable medication. History of repeated admissions at various hospitals for severe dysmenorrhea was present.

Examination

On general physical examination, general condition was stable and her vitals were normal. On per abdominal examination, abdomen was soft but tenderness present.

Her abdominal sonography was suggestive of uterine endometrial thickness 7 mm. Left ovary/adnexa: Two oval hypoechoic mass 44 mm and 40 mm. Thick mucus content could be endometriosis.

Her MRI pelvis was suggestive of abnormal uterine contour seen towards right side of pelvis appearing curved and elongated with normal endometrial cavity and normal myometrial zonal anatomy. Rudimentary horn measuring 5.6×3.8×4.3 cm seen towards left side of pelvis with distended endometrial cavity. Left ovary showed well defined mass like lesions diffusely hyperintense indicative of haemorrhagic component. An elongated convoluted tubular structure with maximum thickness of 1.5 cm seen in left adnexa abutting the left ovary (Figure 1).



Figure 1: MRI of rudimentary horn towards left side with distended endometrial cavity with hyper intense contents.

Decision of laparoscopic rudimentary horn removal was taken after explaining the condition to patient and her attendant.

Intraoperative findings-5×3cm non-communicating rudimentary horn containing hematometra and 3×3 cm hematosalpinx was present on left side (Figure 2).



Figure 2: Preoperative of rudimentary horn.

The rudimentary horn was adherent to the adjacent gut and omentum and numerous aberrant blood vessels were attached to it. On further inspection, small size uterus with left sided tube and ovary were present near right lateral pelvic wall.

Around 200 ml of altered thick blood, brown in color was collected in that rudimentary horn. The right uterine horn was normal, with normal right tube, ovary and round ligament. Her left rudimentary horn and left fallopian tube was removed. Right unicornuate uterus left intact so she can conceive in future.

Cut section of the left hemi-uterus showed that the cavity was filled with dark coloured fluid (old blood).

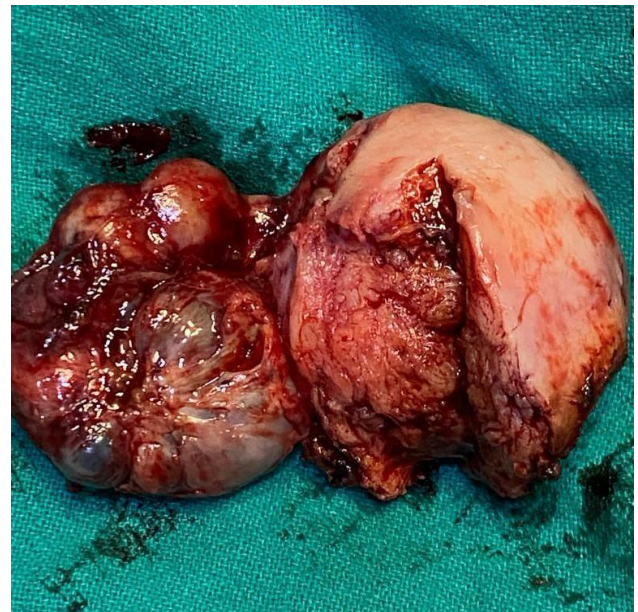


Figure 3: Rudimentary horn of uterus removed and sent for histopathological examination.

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Cut section of the left hemi-uterus showed that the cavity was filled with dark coloured fluid (old blood).

The specimen was sent for histopathological examination which revealed uterine rudimentary horn (5×3×3 cm) with functional endometrium with hematometra with one sided fallopian tube (3 cm). Tube dilated and filled with blood.

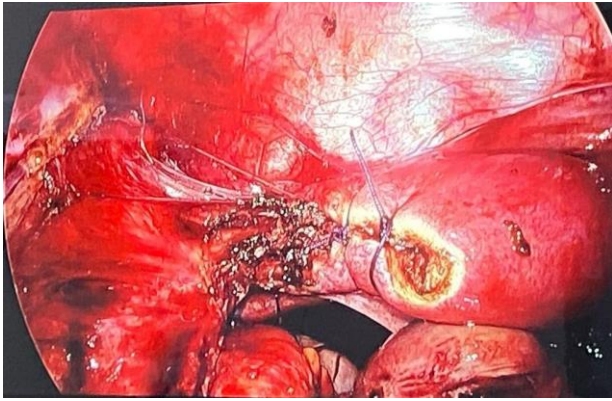


Figure 4: After removal of rudimentary horn.

DISCUSSION

Normally the fusion of two Mullerian ducts occurs to form the uterus, fallopian tube, cervix and proximal two-third of vagina. Abnormal formation, fusion or resorption of the Mullerian ducts during embryogenesis results in the development of Mullerian duct anomalies.⁸ These are estimated to occur in 0.1-0.5% of women.⁹ Defective formation and union of malformed duct with contralateral duct results in unicornuate uterus with rudimentary horn. Rudimentary horn may consist of a functional or nonfunctional endometrium. It can be communicating or non-communicating but in 80-90% of cases it is non-communicating. Women with this anomaly are susceptible to many obstetric and gynecological complications like infertility, endometriosis, dysmenorrhea, hematometra, frequent first trimester abortions, malpresentation and preterm labour.¹⁰ Non-communicating and functional rudimentary horn can cause severe pain in abdomen due to the hematometra as seen in present case. According to American fertility society classification of Mullerian anomalies, our patient belongs to class II or class 3 of the modified AFS classification by Rock and Adam having unicornuate uterus with non-communicating rudimentary horn with functional endometrium. Imaging helps in early diagnosis of these anomalies First baseline investigation is sonographic examination. However, on basis of negative ultrasound findings Mullerian duct anomalies cannot be excluded. MRI has proven to be standard imaging technique with high rate of diagnostic accuracy for Mullerian abnormalities.¹¹ It provides high resolution images of uterine body, fundus, and cervix and can assess the urinary tract anomalies also. Once diagnosis is made, horn should always be excised along with adjacent tube.

CONCLUSION

The diagnosis and management of uterine anomalies are often a challenge for gynaecologist. A high index of

suspicion is must for the presence of uterine anomaly in patient complaining of refractory cyclical pelvic pain and adequate workup is necessary to make a correct diagnosis. The main aim of surgical excision of symptomatic and non-communicating rudimentary horn is pain relief.

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Ethical approval: Not required

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