

Hysterectomy in a Double Uterus

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ABSTRACT

Bicornuate uterus is a common type of uterine malformation, taking the form of a double uterus with a single cervix and vagina. In this journal, we report a case of 43 year old who presented with complaints of heavy menstrual bleeding and was diagnosed to have bicornuate uterus with multiple small fibroids. Here we highlight the surgical techniques performed during laparoscopic hysterectomy to prevent complications and overcome the unique challenges associated with this case in a tertiary care center.

INTRODUCTION

The uterus is formed by the fusion of two paramesonephric ducts (Müllerian ducts) during embryogenesis. The separate ducts fuse into a single uterine body between the sixth and eighth weeks of gestation [1]. Failure of complete fusion of the Müllerian ducts leads to various types of malformations of the female genital tract [2]. The incidence of uterine anomalies is 0.06% to 38% in the general population [3]. Bicornuate uterus is a common type of uterine malformation, taking the form of a double uterus with a single cervix and vagina. Each uterus has a single horn linked to an ipsilateral fallopian tube that faces its ovary [4]. Hence the anatomy is totally different when compared to a normal uterus. Hence while performing total laparoscopic hysterectomy, the key points of surgical safety should be followed to prevent extensive hemorrhage, bladder injury or ureter injury.

CASE REPORT

A 43 year parous female with one live child presented with complaints of heavy menstrual bleeding since 1 year which was not controlled with medical management. Transvaginal Ultrasound showed bicornuate uterus with small multiple intramural fibroids and adenomyosis. Mri was done to rule out renal anomalies. Patient underwent laparoscopic hysterectomy after proper counseling in view of risks associated with the surgery and need for open surgery in case of complications. Intraoperative findings noted to be a bulky double uterus with small multiple fibroids two tubes arising from different horns, ovaries found to be normal (Figures 1 & 2).

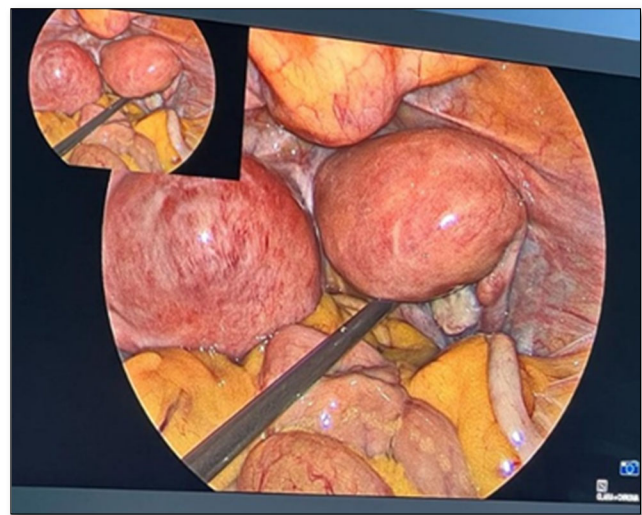


Figure 1. Double uterus.

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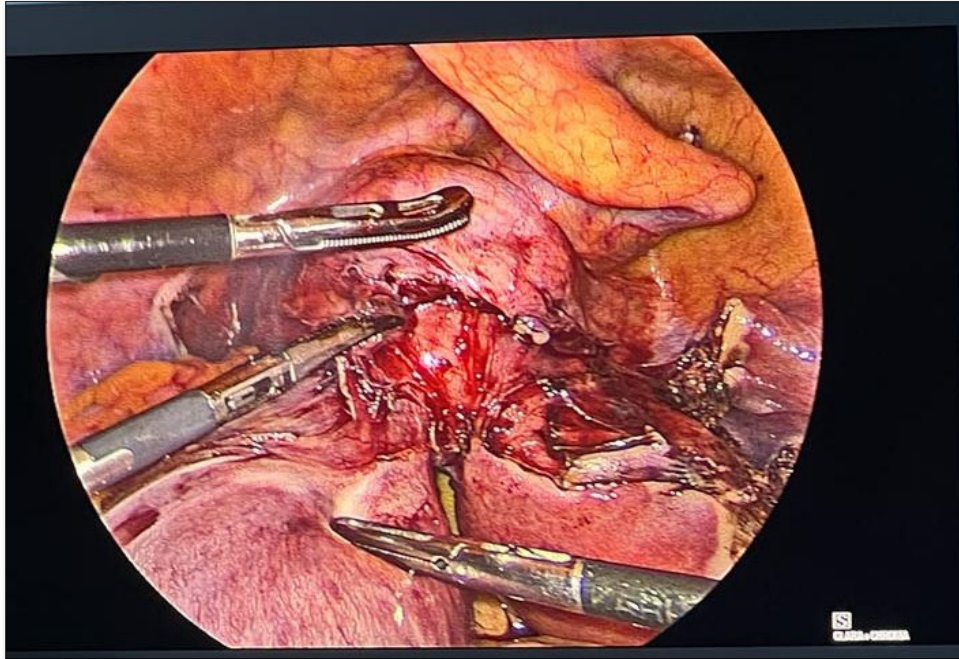


Figure 2. Bladder separation.

We proceeded with step by step dissection by carefully identifying the anatomy and dissecting through the planes. Bilateral ureters were identified and dissected to prevent any ureter injury and a wider bladder flap was separated for ease (Figure 3).

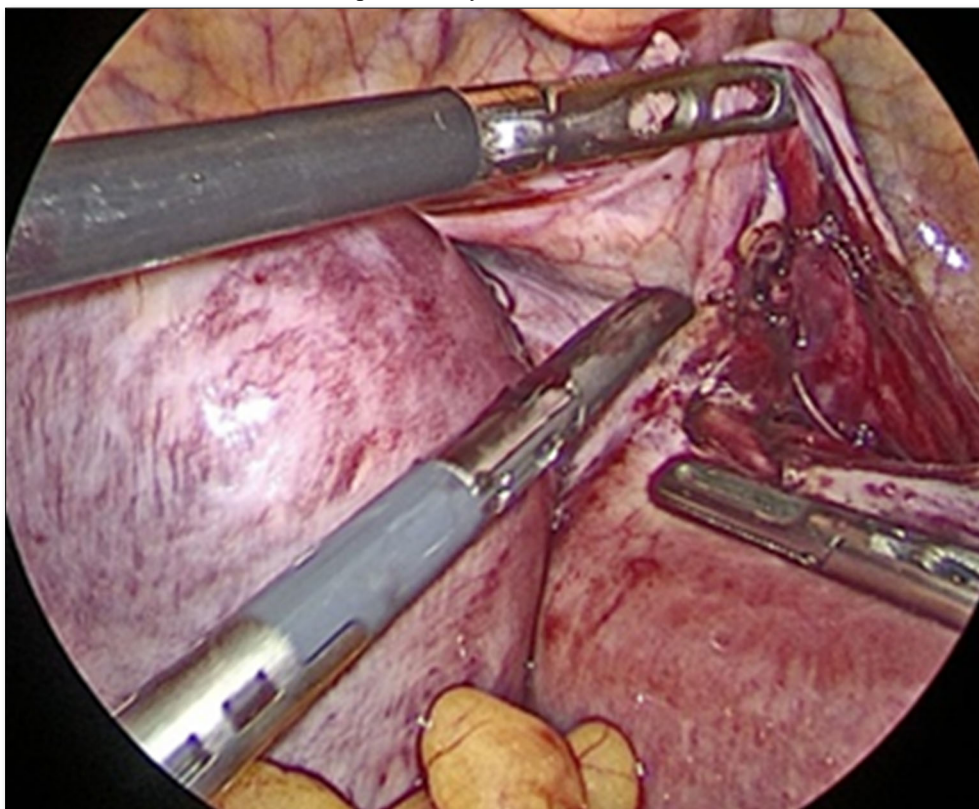


Figure 3. Bladder flap.

The specimen was removed through the vagina with two distinct horns of uterus separately and vault sutured (**Figure 4**).

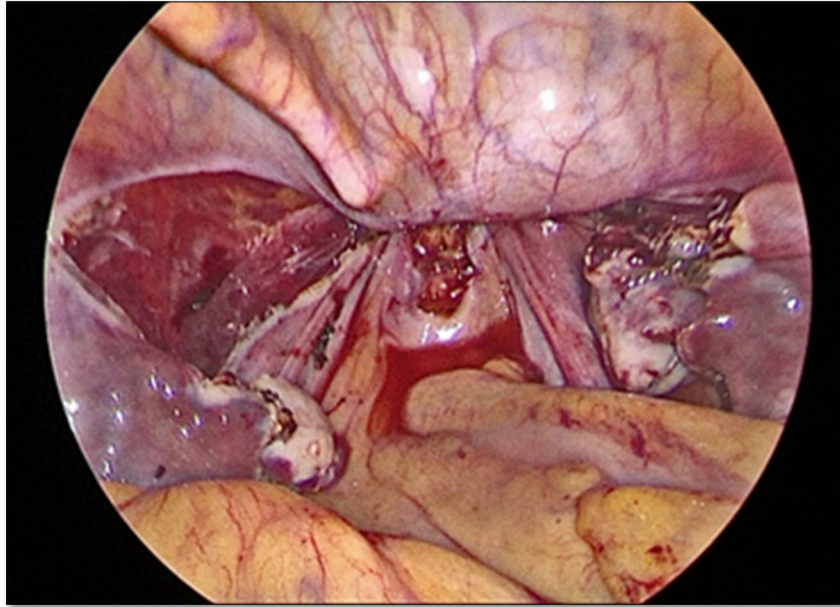


Figure 4. Vault.

Cut section of the specimen showed, two separate horns of the uterus with two distinct endometrial cavities with single cervix (**Figure 5**).

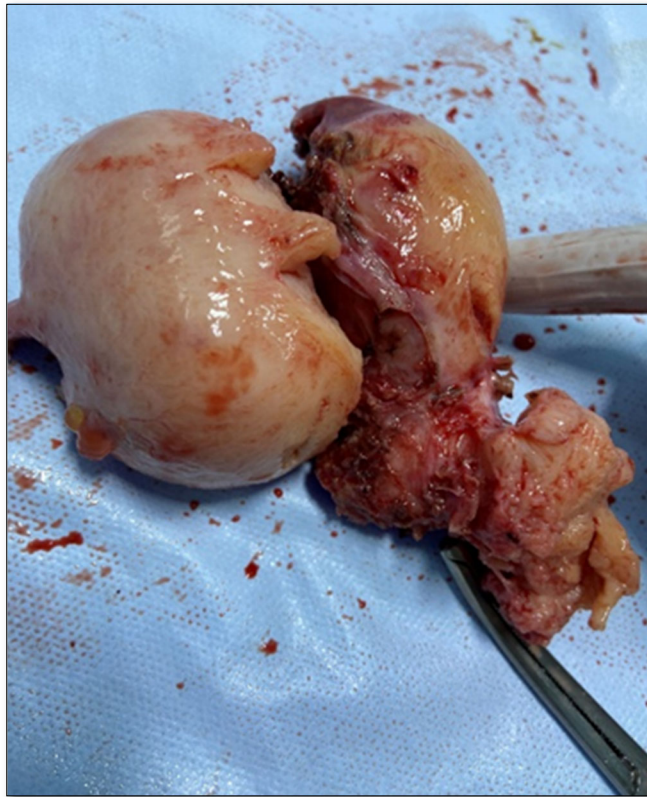


Figure 5. Cut section

DISCUSSION

Laparoscopic hysterectomy in a double uterus is quite challenging as the anatomy is a bit different from the normal uterus. In the cases of müllerian anomalies, dedicated preoperative imaging of the renal tract ruled out urinary tract abnormalities that may be associated with congenital müllerian duct anomalies (MDAs). Renal agenesis is seen in 30% of müllerian anomalies. Hence accurate diagnosis should be made and proper planning prior to surgery should be undertaken to avoid intraoperative complications.

Accurate knowledge of the course of ureter is required for surgeons starting on complex laparoscopic, open and vaginal surgery.

Both the ureters are identified in the pelvic side walls and marked down throughout the course. Then the surgery is begun. Along with dissection of side walls, bladder flap is dissected widely to facilitate a wider colpotomy. To separate the bladder we can retro fill with CO₂, methylene blue to delineate the plane and create a wider bladder flap. Then after identifying proper course and uterine anatomy we can proceed with step wise cutting of uterine supports making sure that we are closer to uterus.

The Key points of surgical safety are identification of ureter (Bilateral ureterolysis), and ligating the uterine arteries at their origin, which would be done only after proper placement of colpotomy cup which would allow proper division of uterine arteries.

CONCLUSION

Minimally invasive procedure is ideal for patients with müllerian duct anomalies. Identifying the ureters and additional renal anomalies is the foremost step to complete hysterectomy safely in these patients. Planning and mental preparedness is required while approaching complex surgical cases which are the key to successful management of the cases that deviate from the "norm".

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