



## Incidental Finding of Bicornuate Uterus in a patient posted for Medical termination of pregnancy and Tubal Ligation

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### Abstract

*Bicornuate uterus is due to incomplete fusion of Mullerian ducts at the level of uterine fundus. In this condition lower uterine segment as well as cervix is fused thereby resulting into 2 separate but communicating endometrial cavities. Although majority of the patients having bicornuate uterus remain relatively asymptomatic some women may present with recurrent abortions. Tubectomy in patients with bicornuate uterus may pose a peculiar dilemma for operating surgeon. In cases of bicornuate uterus sometimes only one fallopian tube is found then the possibility of bicornuate uterus must be kept in mind. Failure to do so may result in future pregnancy thereby putting the surgeon at the risk of unnecessary litigations. We hereby present this case of a 35-year-old female patient having 8 weeks pregnancy and was willing for medical termination of pregnancy and tubal ligation. During tubectomy tracing of right cornual structure led to another cornue of uterus and fallopian tube with right fallopian tube and right ovary. Right fallopian tube was caught with babcock forceps and tubectomy was carried out by modified pomeroys method. Left fallopian tube was also ligated. This case highlights the need to bear in mind the possibility of bicornuate uterus in cases posted for tubectomy who were found to have only 1 fallopian tube during surgical procedure. All such patients should be explored under general anaesthesia and if such facilities are not available (for example at primary health care centre level) then same should be clearly explained to the patient and also should be documented on case paper as well as discharge card and in that case patient must be advised about continuation of alternative contraceptive methods. We hereby report a case of 35-year-old with 10 weeks pregnancy who underwent medical termination of pregnancy. There was past history of tubal ligation in the patient and indication for medical termination of pregnancy was contraceptive failure. During tubectomy she was found to have bicornuate uterus. Left fallopian tube was found to be ligated. Tubectomy on right side was done by modified pomeroys method.*

**Keywords:** Mullerian duct anomalies, Bicornuate uterus, Tubectomy, Modified Pomeroy's method.

### Introduction

Developmental anomalies of Mullerian duct system is one of the common occurrence in modern gynaecology practice and with advances

in imaging techniques and advent of modern imaging equipment its being picked up by radiologists more frequently.<sup>1</sup> Mullerian ducts eventually differentiate into uterus, fallopian

tubes, cervix and upper vagina. Any disruption in this differentiation may result into various malformations of female genital tract.<sup>2</sup>The developmental anomalies of female genital tract has been classified into 7 classes by American society of reproductive medicine, Class I (Uterine agenesis), class II (unicornuate uterus), Class III (Didelphys uterus), Class IV (Bicornuate uterus), Class V (Septate Uterus), Class VI (Arcuate Uterus) and Class VII (Diethylstilbesterol related abnormalities such as uterine hypoplasia and T-shaped uterine cavity).<sup>3</sup>

These remain usually undetected and are commonly diagnosed when imaging is done for some other reason. Usually, these anomalies are first detected at the time of puberty when these young girls experience symptoms such as menstrual abnormalities. In married women these abnormalities may be first detected when patients are investigated for infertility, recurrent abortions as well as obstetric complications.<sup>4</sup>

Bicornuate uterus is second most common Mullerian duct anomaly only to be preceded by septate uterus which is the most common Mullerian duct anomaly. Bicornuate uterus can further be subdivided into Bicornuate bicollis (complete division till external Os) and Bicornuate Unicollis (partial division not extending up to internal Os).<sup>5</sup> Bicornuate uterus results from incomplete fusion of Mullerian ducts at the level of uterine fundus resulting into 2 separate and communicating endometrial cavities. Bicornuate uterus usually remains undetected since this anomaly do not create much reproductive system associated problems.<sup>6</sup> In many cases bicornuate uterus remain undetected till some surgical procedure such as cesarean section is undertaken and diagnosis is made. Many randomised controlled trials comparing fertility rates of women with bicornuate uterus and women with normal uterus has failed to find any significant difference in fertility rates of these 2 groups indicating that presence of bicornuate uterus doesn't affect fertility in a significant way.<sup>7</sup>

Mullerian duct anomalies have ramifications not only for fertility but also may affect the surgical approach for various surgeries such as tubectomy done for the purpose of female sterilisation. In cases of bicornuate uterus posted for tubal ligation if only one fallopian tube is found during surgery and if there is no history of any surgical procedure done for any reason then the possibility of bicornuate uterus must be kept in mind. And in these cases it is always preferable to explore such patients under anesthesia if such facilities are available.<sup>8</sup> We hereby report a case of 35 year old with 10 weeks pregnancy who underwent medical termination of pregnancy and tubal ligation. During tubectomy she was found to have bicornuate uterus. Left fallopian tube was found to be ligated. Tubectomy on right side was done by modified pomeroys method. This case emphasises to keep possibility of bicornuate uterus and other Mullerian duct anomalies in cases posted for tubectomy and found to have fallopian tube on one side particularly when there is no past history of any pelvic surgery for any reason.

### Case Report

A 5<sup>th</sup> Gravida Female presented to department of obstetrics with history of 3 months amenorrhoea. She had history of tubal ligation 6 months back. Since she has already undergone tubal ligation six months back her past menstrual history was reviewed with a view to find out whether she had irregular menses in past. However, history revealed that she had regular cycles coming every 28-30 days. There was no history of dysmenorrhoea or excessive bleeding. She had 4 living children 2 males and 2 females. On per vaginal examination she was found to have uterine size corresponding to 10 weeks of pregnancy. A urine pregnancy test was done which was found to be positive. An obstetric ultrasound was requested which showed single live pregnancy corresponding to 8 weeks of gestation.



**Figure 1:** Ultrasound image showing bicornuate uterus. During tubectomy gross appearance of Bicornuate uterus

As the patient didn't want to continue pregnancy she was posted for medical termination of pregnancy with contraceptive failure as the primary indication for termination. After routine investigations such as complete blood count, coagulation profile, HIV and HBsAg she was posted for medical termination of pregnancy as well as tubal ligation. Initially suction and evacuation was done. After suction and evacuation conventional minilap incision was taken and left ovary and fallopian tube was examined. Left ovary appeared normal on gross examination and left fallopian tube was found to be ligated. On right side cornual structure was traced which led to another cornue of uterus and an unligated right fallopian tube was found. Right fallopian tube was caught with Babcock forceps and was traced laterally till fimbrial end and tubectomy was carried out by modified pomeroys method. Finally abdomen was closed in layers. Postoperative period was uneventful. Finally, the patient was discharged on day 8 of postoperative period after removal of stitches.

### Discussion

Bicornuate uterus is one of the common Mullerian duct anomalies. It is infact second most common anomaly only to be preceded by septate uterus. It usually remains asymptomatic till they are diagnosed consequent to imaging done for some

other purpose (ie Computerised tomography for abdominal pain etc). In many cases of bicornuate uterus obstetric outcome is uneventful and many studies have not found any significant difference in fertility rates of patients with bicornuate uterus and those having normal uterus. However In some cases it may be associated with infertility, subfertility or recurrent abortions. In addition to having adverse impact on fertility bicornuate uterus may have ramifications for various surgical procedures such as tubectomy done for the purpose of female sterilisation.<sup>9</sup>

In cases of bicornuate uterus sometimes it become difficult to locate fallopian tube on one side and if while doing abdominal tubal ligation if only one fallopian tube is found particularly in cases in whom there is no past history of pelvic surgeries in past then the possibility of Mullerian duct anomalies including bicornuate uterus must be strongly considered. It is recommended that in all such cases patients should be explored under general anaesthesia. In rural set ups such as health subcentre and primary health care centres if such facilities are not available then either such patients should be referred to higher centre for further imaging or this fact should be explained to patient and must be documented clearly on patient case file and discharge card so as to avoid further medicolegal complications if such patients conceive after tubal ligation.<sup>10</sup>

Our case emphasises the importance of keeping possibility of bicornuate uterus in mind in cases where only one fallopian tube is found during abdominal tubectomy. This is all the way more important in rural set up where there is scarcity of various imaging modalities.

### Conclusion

Mullerian duct anomalies such as bicornuate uterus may be the cause of tubal ligation failure in a minority of cases. Such possibility should be kept in mind and all such patients must be explored under general anaesthesia to avoid future tubectomy failure. When facilities for such exploration is not available such as at primary health care centre level then the patient must be informed about such possibility and should be referred to higher centre for further evaluation. This possibility must also be clearly documented on case paper and on discharge card so as to avoid any further medicolegal complications.

**Conflict of Interest:** None

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