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### Case report

## Uterine septum

Dr Amit A.Mehta, Dr. L.S. Khanzode

Kamineni Institute of Medical Sciences, Narketpally-508254, Nalgonda District

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#### ABSTRACT

Uterus, a child-bearing organ lies in pelvic cavity between urinary bladder and rectum. Though hollow it is thick walled and firm in consistency. Uterine malformation is a type of female genital malformation resulting from an abnormal development of the Müllerian duct(s) during embryogenesis. The two Müllerian ducts have fused, but the partition between them is still present, splitting the system into two parts. In septate uterus, a septum divides the uterine cavity into two parts otherwise the uterus is apparently normal. In sub-septate uterus usually the septum affects only the cranial part. A uterine septum is the most common uterine malformation and a cause for miscarriages.

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### 1. Introduction

Uterus, a child-bearing organ lies in pelvic cavity between urinary bladder and rectum. Though hollow it is thick walled and firm in consistency. Uterine malformation is a type of female genital malformation resulting from an abnormal development of the Müllerian duct(s) during embryogenesis. The two Müllerian ducts have fused, but the partition between them is still present, splitting the system into two parts. In septate uterus, a septum divides the uterine cavity into two parts otherwise the uterus is apparently normal. In sub-septate uterus usually the septum affects only the cranial part. A uterine septum is the most common uterine malformation and a cause for miscarriages.

### 2. Case Presentation

During routine dissection for first year MBBS students in Anatomy department, Indira Gandhi Government Medical College, Nagpur; out of 30 cadavers dissected from 2003 to 2006, one female cadaver of 46 years shows longitudinal septum involving total length of uterine cavity

### 3. Discussion

Anatomic abnormalities of uterus are responsible for 10-15% of recurrent abortions. The causes may be congenital or acquired. Congenital anomalies may be due to defects in the mullerian duct fusion or resorption e.g .septate uterus, unicornuate uterus , bicornuate uterus, etc. Acquired anomalies are intrauterine adhesions, uterine fibroids, etc [1].

A uterine septum is a form of a congenital malformation where the uterine cavity is partitioned by a longitudinal septum; the outside of the uterus has a normal typical shape. The partition may involve only the cranial part of the cavity resulting in an incomplete septum or a subseptate uterus, or less frequently the total length of the cavity i.e. complete septum [2].

Most of the uterus is developed from the cephalic part of the utero-vaginal canal which is produced by the fusion of the caudal vertical parts of both mullerian ducts. This process begins caudally and advances cranially. The partition (septum) between them completely disappears by the end of third month. The single duct thus formed is the utero-vaginal canal. The fundus of the uterus is formed by the incorporation of a segment of horizontal parts of mullerian ducts [3]. Septal resorption may be arrested at any point, resulting in variable lengths of septum in the septate uterus [4]. The septum tends to be mainly muscular superiorly and more fibrous and thinner towards the cervix. Thus a complete septum formation means an earlier disturbance of this absorption than the incomplete form. Causes for incomplete absorption are not known. About 3% of women without a history of reproductive problems had a uterine septation [5]. In contrast, in about 15% of patients with recurrent pregnancy loss septate uterus is the most common finding [6].

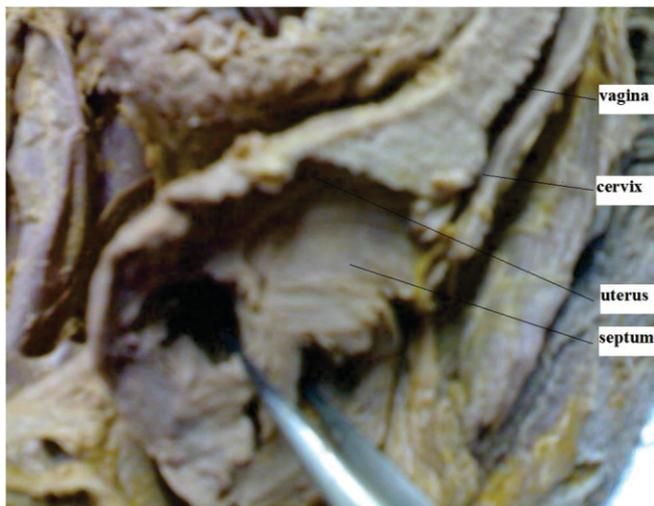
The condition may not be known to the affected individual and not result in any reproductive problems; thus normal pregnancies may occur [7]. However, it is associated with a higher risk for miscarriage, premature birth, and malpresentation. 60% risk of a spontaneous abortion more commonly occurs in the second than in the first trimester [8]. The condition is also associated with abnormalities of the renal and skeletal system [9].

\* Corresponding Author : Dr Amit A.mehta  
Kamineni Institute of Medical Sciences  
Narketpally-508254  
Nalgonda District  
E-mail: [dramit\\_mehta@yahoo.com](mailto:dramit_mehta@yahoo.com)

A pelvic examination may lead to the discovery of a uterine septum. However, it is normal in most cases. Transvaginal ultrasonography and sonohysterography, MRI, and hysteroscopy can also be used for diagnosis. MRI is considered the preferred modality due to its ability to evaluate the uterine contour, junctional zone, and other pelvic anatomy. More recently 3-D ultrasonography is excellent non-invasive method to delineate the condition [5]. Hysterosalpingography was used to help diagnose the uterine septum, however, a bicornuate uterus may produce a similar image. But in the bicornuate uterus the uterine body is cranially doubled (two uterine horns).

Hysteroscopic removal of a uterine septum is generally the preferred method. A septum that has not caused problems may not be removed. There is controversy whether a septum should be removed prophylactically prior to a pregnancy or infertility treatment [10]. Lee et al reported 77.3% of uncomplicated delivery rate after hysteroscopic septum resection [11].

**Figure: Showing uterine septum**



#### 4. Conclusion

A uterine septum is the most common uterine malformation occurs due to the defects in the mullerian duct resorption and is a cause for miscarriages. It is diagnosed by medical imaging techniques, i.e. ultrasound or an MRI. MRI is considered the preferred modality due to its ability to evaluate the uterine contour, junctional zone, and other pelvic anatomy. More recently 3-D ultrasonography is excellent non-invasive method to delineate the condition. A uterine septum can be corrected by hysteroscopic surgery. This procedure greatly decreases the rate of miscarriage for women with this anomaly.

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