

## Original Article

# CLINICAL PRESENTATIONS OF CONGENITAL UTERINE ANOMALIES

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**Objective:** To observe clinical presentations of uterine anomalies.

**Material & Methods:** Uterine anomalies were detected during prenatal ultrasonography, detected during LSCS done for various obstetric indications, discovered during EUA, and detected during laparoscopy or laparotomy. The clinical data of these patients was reviewed regarding age, parity, marital status and presenting symptoms. All data was entered in pre designed proforma and analyzed using SPSS version 14.

**Results:** Total 43 cases of uterine anomalies were detected. Most common type of anomaly detected was bicornuate uterus followed by uterus didelphys, arcuate uterus, unicornuate uterus with non communicating horn and septate uterus. These anomalies clinically presented with fetal malpresentations, dysmenorrhoea, retained placenta and primary infertility. Diagnosis was confirmed during prenatal USG, examination under anesthesia, during LSCS, during laparoscopy and laparotomy.

**Conclusion:** Women with uterine anomalies complain of symptoms such as dysmenorrhoea, pelvic pain, but most are asymptomatic and diagnosed incidentally. They are frequently complicated by obstetrical challenges such as preterm labour, malpresentation and uterine atony. Thus, when diagnosis of uterine anomaly is made, it is crucial to discuss with patients about their expected prognosis on fertility and possible obstetrical outcomes and complications and to provide appropriate therapy accordingly.

**Keywords:** Uterine anomalies, dysmenorrhoea, malpresentation, uterine atony, preterm labour

## Introduction

The true prevalence of uterine anomalies in the population is unknown. It is insufficient to consult the older medical literature because of inconsistent diagnostic techniques used in earlier studies, and the heterogeneity of subject populations that were studied. However a recent study indicated that the prevalence of uterine anomalies varies from 0.1-10%.<sup>1-3</sup> 75% women with Mullerian abnormality will remain asymptomatic.<sup>4</sup> The remaining 25% will present with various symptoms. These are primary amenorrhoea, hematocolpos and hematometra, dyspareunia, infertility, repeated miscarriages and obstetric complications including breech presentation, premature labour, abnormal presentation with dystocia, retained placenta and necessity for caesarean section.

There are various severities of uterine anomalies that range from complete agenesis to different phenotypes. These abnormalities can be diagnosed using a combination of ultrasound, hysteroscopy and/or laparoscopy.<sup>2</sup> The American Society for Reproductive Medicine has classified Mullerian anomalies in an attempt to provide clinician with a tool to better document the actual anomaly and to aid subsequent follow-up of patients in terms of

conception and pregnancy outcome.<sup>5</sup> Normal pregnancy can occur in patients with Mullerian duct anomalies, but obstetric complications such as spontaneous abortion, stillbirth and preterm birth are frequent.<sup>6,7</sup> Adequate assessment is essential in these patients and could further improve their prenatal outcome. Uterine anomalies cannot be diagnosed by simple bimanual pelvic examination and might be missed on ultrasound.<sup>3,8</sup> Laparoscopy or laparotomy is more appropriate for distinguishing bicornuate and septate uterus.<sup>9</sup> The aim of this study was to observe various presenting symptoms of uterine anomalies.

## Material & Methods

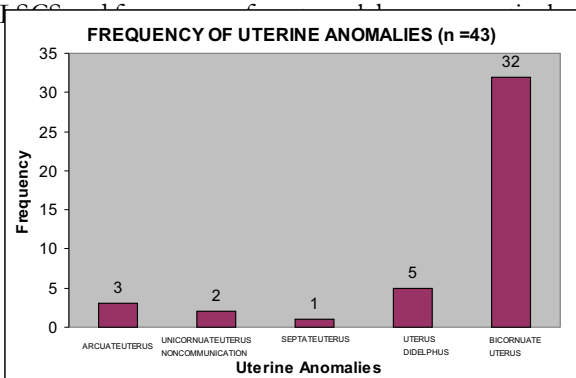
This was an observational study conducted in department of obstetrics and gynecology from 2005-2010 involving 43 patients. Uterine anomalies were detected during prenatal ultrasonography, during LSCS done for various obstetric indications, during EUA and during laparoscopy or laparotomy. The clinical data of these patients was reviewed regarding age, parity, marital status and presenting symptom. All data was entered in pre designed proforma and analyzed using SPSS version 14.

## Results

During the study period 43 cases of uterine anomalies were detected. The age of patients ranged between 22

and 43 years. The mean age was 28 years. The parity of patients was from 1 to 7 and mean parity was 1.

**Figure-1** is showing types of uterine anomalies and their frequency. **Figure-2** is showing marital status of patients. **Table 1,2,3,4** are summarizing presenting symptoms, diagnosis, indications of

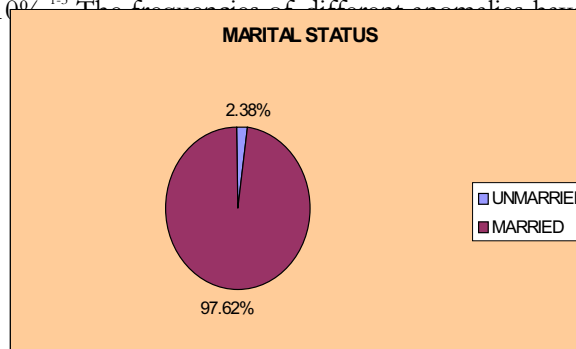


**Figure-1:** Frequency of uterine anomalies (n=43)

## Discussion

Uterine structural anomalies are often asymptomatic

and are discovered during pregnancy or at the time of abortion or during infertility evaluation.<sup>1</sup> Depending on method of patient selection, the reported incidence of uterine anomalies ranges from 0.1 to 10%.<sup>1-3</sup> The frequency of different anomalies has



**Figure-2:** Frequency of married and unmarried woman in study population.

have been differently quoted in various studies.

An 18 years study published in Korean Journal in 2008 titled “Clinical characteristics of 110 women with uterine anomalies” conducted at St. Mary’s Hospital, the Catholic University of Korea, concluded that the most common anomaly detected was bicornuate uterus (42 cases 38.2%).<sup>10</sup> Similarly another study done in Aristotle University, Belgium, on clinical implications of uterine malformations and

**Table-1:** Presenting symptoms of different types of uterine anomalies (n=43).

Uterine Anomalies	Fetal malpresentation	Dysmenorrhoea	Infertility	Retained Placenta	Other	Total
Bicornuate uterus	16	0	0	2	14	32
Uterus didelphys	2	2	1	0	0	5
Septate uterus	0	0	0	0	1	1
Unicornuate uterus Noncommunicating horn	0	0	0	0	2	2
Arcuate uterus	2	0	0	0	1	3
Total	20	2	1	2	18	43

**Table-2:** Diagnosis of Uterine Anomalies (n = 43).

Uterine Anomalies	Prenatal Ultrasound	Diagnosed During LSCS	Diagnosed on laparoscopy	Diagnosed during laparotomy	Previously known	Diagnosed on EUA	Total
Bicornuate uterus	4	24	0	0	2	2	32
Uterus didelphys	0	2	3	0	0	0	5
Septate uterus	0	0	0	1	0	0	1
Unicornuate uterus Noncommunicating horn	0	2	0	0	0	0	2
Arcuate uterus	0	2	0	1	0	0	3
Total	4	30	3	2	2	2	43

**Table-3:** Indications of LSCS (n=30)

Uterine Anomalies	Fetal malpresentation	Failed induction	Failure to Progress	Previous LSCS	Fetal Distress	Total
Bicornuate uterus	15	1	3	3	2	24
Uterus didelphys	0	0	0	2	0	2
Septate uterus	0	0	0	0	0	0
Unicornuate uterus Nocommunicating horn	0	0	0	2	0	2
Arcuate uterus	2	0	0	0	0	2
<b>Total</b>	<b>17</b>	<b>1</b>	<b>3</b>	<b>7</b>	<b>2</b>	<b>30</b>

**Table-4:** Frequency of preterm labour with uterine anomalies (n=43).

Clinical Features	Preterm Labour		Total
	Yes	No	
Bicornuate uterus	6	26	32
Uterus didelphys	1	4	5
Septate uterus	0	1	1
Unicornuate uterus Nocommunicating horn	0	2	2
Arcuate uterus	1	2	3
<b>Total</b>	<b>8</b>	<b>35</b>	<b>43</b>

Most common anomaly encountered was bicornuate uterus (25%).<sup>9</sup> These 2 studies support our findings as we observed that most common anomaly encountered was bicornuate uterus (n=32, 74.4%), however a retrospective study, done in Peking University Third Hospital China from June 1998 to June 2009, to evaluate the fertility and obstetric outcome of 116 patients with uterine malformations with pregnancy<sup>11</sup> concluded that septate uterus (n=43, 37.1%) followed by uterus didelphys (n=28, 24.2%) were the most common uterine anomalies observed. Raga et al in 1997 while studying reproductive impact of congenital mullerian anomalies observed that most common anomaly detected in infertile women were septate uterus (33.6%) and arcuate uterus (32.8%).<sup>12</sup> Kim HJ and colleagues in 2008<sup>10</sup> observed a high incidence of uterus didelphys (35.5%). These above 3 studies do not support our observation as in our study incidence of uterus didelphys (n=5, 11.6%), arcuate uterus (n=3, 7%) and septate uterus (n=1, 2.3%) are quite low. The presence of a malformed uterus in a woman is thought to impair normal reproductive performance by increasing the incidence of early and late abortions, preterm labour, as well as the rate of obstetric complications (Golan et al., 1992; Acien 1997). So these could be the presenting symptoms of patients with uterine anomalies. High rates of

premature labour and fetal malpresentation have been reported by many investigators. G. Zlopasa et al<sup>13</sup> compared reproductive outcome in women with uterine anomalies and women with normal uterus and evaluated the effect of resectoscope metroplasty involving 105 women. They concluded that uterine anomalies could present with preterm labour, IUGR and breech presentation and there are increased chances of abortions and LSCS. Zhang Yan and colleague<sup>11</sup> also highlighted high frequency of preterm labour (19.8%) and fetal malpresentations (38.8%) and LSCS (78.5%). We concluded that preterm delivery rate 18.6%, fetal malpresentation 46.5% and LSCS rate was 70%. So the results are comparable. All LSCS were done for malpresentations and other obstetric indications and in all cases uterine anomalies were detected incidentally during LSCS. One Korean study published in 2008<sup>10</sup> does not support our findings as they concluded preterm delivery rate of 9.5% and malpresentation 18%. However LSCS rate was 78.5% which supported our observation. Other presenting symptoms were dysmenorrhoea (n=2, 4.6%) and primary infertility (n=1, 2.3%). This is in comparison with findings observed by Kim HJ and colleague.<sup>10</sup> They observed that 2.7% patients presented with primary infertility and 1.8% with dysmenorrhoea. Pocketing of cornu and triangular spasm of fundus may lead to unexpected and unusual obstetric complications e.g. retained placenta requiring manual removal which may be the first indication of anomalous uterus.<sup>14</sup> In our study two patients of bicornuate uterus (4.6%) presented with retained placenta and diagnosis was confirmed by examination under anaesthesia. This finding is in contrast to 17% cases of retained placenta observed by Lary K in 1976 in Texas.<sup>15</sup> Ultrasound has a sensitivity of 44% in diagnosing uterine anomalies. A retrospective observational study conducted in France in 2008 involving 110 patients diagnosed with uterine

anomalies, observed that prenatal ultrasonography detected 12.7% cases of uterine anomalies.<sup>16</sup> We detected 4 patients (7.4%) during prenatal ultrasonography.

## Conclusion

Women with uterine anomalies complain symptoms such as dysmenorrhoea, pelvic pain, but most are asymptomatic and diagnosed incidentally. They are frequently complicated by obstetrical challenges such as preterm labour, malpresentation and

Caesarean section. Thus, when diagnosis of uterine anomaly is made, it is crucial to discuss sufficiently with patients about their expected prognosis on fertility and possible obstetrical outcomes and complications and to provide appropriate therapy accordingly, and to provide appropriate therapy accordingly.

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