A Study of Mullerian Anomalies in a Tertiary Care Teaching Hospital of North India

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Abstract: Mullerian developmental defects are congenital anomalies of the female reproductive tract which may adversely affect a woman’s obstetric and gynaecological health. In the present study, all patients presenting with Mullerian anomalies in the department of Obstetrics & Gynaecology, MMIMSR, a tertiary care teaching hospital in Ambala, Haryana, North India, during the period from July 2013 to June 2014 were included. They were studied & results were analysed including the incidence & presenting complaints.

Patients who were found to be suffering from Mullerian anomalies (diagnosed through previous clinical history, physical examination, radiological aids eg USG, HSG, MRI & diagnostic laparoscopy) were included in this study and the results were analysed critically.

4. Results and Observations

Out of 15000 patients, 16 had Mullerian anomalies, so the incidence was found to be 0.10% (1 in 1000).

<table>
<thead>
<tr>
<th>Type of Mullerian anomaly</th>
<th>No of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unicorneate uterus</td>
<td>4 (25.0)</td>
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<tr>
<td>Bicornuate uterus</td>
<td>3 (18.7)</td>
</tr>
<tr>
<td>Transverse vaginal septum with vaginal agenesis</td>
<td>2 (12.5)</td>
</tr>
<tr>
<td>Uterus didelphys</td>
<td>1 (6.25)</td>
</tr>
<tr>
<td>Hypoplastic uterus</td>
<td>1 (6.25)</td>
</tr>
<tr>
<td>Septate uterus with complete longitudinal vaginal septum</td>
<td>1 (6.25)</td>
</tr>
</tbody>
</table>

Patients usually presented with abdominal pain, primary amenorrhoea, dysmenorrhoea & infertility. Most of these patients presented with more than one complaint.

In our study, 66% were in the age group 15-17 years, followed by 20% in 18-20 years & 14% in 21-23 years.

Keywords: unicorneate, bicornuate, mullerian anomalies, vaginal septum, renal abnormality.
Out of three patients with transverse vaginal septum presented with primary amenorrhoea, two had associated vaginal agenesis & were treated with excision of the septum along with McIndoe’s vaginoplasty followed by mould insertion and regular vaginal dilatation. All three patients resumed regular menstrual cycles thereafter. Patients with obstructive mullerian anomalies presented with abdominal pain, dysmenorrhoea and haematocolpos/haematometra. Those with septum were treated successfully with excision of the septum followed by drainage of haematocolpos/haematometra. Three cases of unicornuate uterus with non-communicating functional horn presenting with haematometra with endometrioma were treated with excision of the rudimentary horns and removal of the chocolate cysts. One case of unicornuate uterus with non-communicating functional horn with ipsilateral chocolate cyst was treated with laparoscopic excision of the functional horn & chocolate cyst. Out of three cases of bicornuate uterus, two were incidental findings during caesarean section (one for primi with breech & one for transverse lie with complete placenta previa). One case of septate uterus with complete longitudinal vaginal septum was treated with excision of the longitudinal septum hysteroscopically.

Three patients had associated other congenital anomalies:
- Complete vaginal septum with haematocolpos (absent right kidney + ureter)
- Unicornuate uterus with non-communicating functional horn with ipsilateral chocolate cyst (ipsilateral renal agenesis)
- Primary amenorrhoea with transverse vaginal septum in lower vagina (obstructed) had a small, contracted pelvic kidney.

Discussion

In this particular study, the incidence of Mullerian anomalies was found to be 16 out of 15000 patients (0.10%) ie 1 in 1000. Similar incidence was observed in other studies conducted by Rock et al (1,3) and Crook, D.O et al (11). In our study, 66% of patients presented between 15-17 years. In another notable study by Mane et al, the mean age of presentation was typically at 17 years (5). In a study by Reindollar et al, it was seen that Mullerian anomalies typically presented in adolescence (6). In our study, around 80% of the total patients presented in the adolescent age group (10-19 years). The patients mostly presented with chronic abdominal pain (50%) closely followed by primary amenorrhoea (43.7%), dysmenorrhoea (25%), dyspareunia (18%) & infertility (31.2%). In a study by Jeon et al, these again were the most common presenting complaints with incidence of 10.8%, 11.5%, 12.15%, 12.4% and 8.6% respectively (7). Among the cases presenting with primary amenorrhoea, 42.8% had transverse vaginal septum followed by dysgenesis of Mullerian ducts (14.2%). All the cases of transverse vaginal septum were treated successfully with resection of the septum & those with vaginal agenesis were treated by McIndoe’s vaginoplasty. The results were comparable with those in a study by Parikh R M et al (8). In our study, 37.5% patients presenting with abdominal pain had transverse vaginal septum with haematocolpos/haematometra. These values correspond well with the findings of Deligeoroglou et al, where four patients of transverse vaginal septum presented with hypogastric abdominal pain & were treated accordingly (9). In 25% cases, the abdominal pain was found to be because of unicornuate uterus with a non-communicating horn. The cause of pain in the case of a rudimentary horn was most probably due to distension of the horn. Rusen Atmaca et al, also cited a similar case presenting with acute abdominal pain & was treated with excision of the rudimentary horn (10). Among the cases presenting with the chief complaint of infertility, 31.2% had dysgenesis of Mullerian ducts which were surgically corrected with vaginoplasty and proper patient counseling. Similar findings were found in a study by Grimbizis G. F. et al (12). A case of septate uterus with complete longitudinal vaginal septum was treated successfully with hysteroscopic excision of the septum. There were three cases of bicornuate uterus, out of which two were incidentally diagnosed during emergency caesarean section (one for primigravida with breech presentation & second for transverse lie with complete placenta previa). We found that the most common co-existing congenital anomalies were renal (18.75%). According to Li S et al, in his study, found 30% association between renal agenesis and Mullerian anomalies. (15)

References


### Table: Age and Percentage of Patients

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Percentage of patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-17</td>
<td>66</td>
</tr>
<tr>
<td>18-20</td>
<td>20</td>
</tr>
<tr>
<td>21-23</td>
<td>14</td>
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International Journal of Science and Research (IJSR)
ISSN (Online): 2319-7064

Volume 4 Issue 1, January 2015
www.ijsr.net
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