

## **Hystroscopic management of Ashermans Syndrome**

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### **Abstract**

**Objective:** To confirm the diagnosis of Asherman's syndrome in patients with scanty menses / amenorrhoea or infertility and to assess the effectiveness of hysteroscopy in the treatment of Asherman's syndrome.

**Methods:** A hospital based descriptive study conducted on 20 patients presenting with amenorrhoea, oligomenorrhoea, or infertility from Jan 2004 to June 2005 They were selected after excluding hormonal imbalances, premature ovarian failure and congenital uterine abnormalities. All patients underwent diagnostic hysteroscopy and resection of adhesions. Specimens were sent for Histopathology and bacterial culture.

**Result:** A total of 20 patients were included in this study, the median age was 26 years, 65% had presented with scanty menses with secondary infertility, 20% with secondary amenorrhoea, and 15% with primary infertility alone. Hysteroscopic findings showed thick fibrous adhesions in 45% patients, 40% had filmy adhesions and 15% had muscular adhesions.

It was seen that 65% had adhesions in the body of uterus, 25% at the site of internal os and 1% had adhesions in the cervical canal as well as the body of the uterus. Normal menstrual cycle was resumed in 95% patients, whereas two patients conceived and were followed to term.

Dense fibrous tissue with few patches of calcification and no signs of secretory or proliferative cells was found in 35% patients. In 45% endometrium showed proliferative changes and collagen fibers. Only 1 patient had a positive AFB culture and the histopathology showed few granulomas with epithelioid cells most of the tissue replaced by necrotic tissue with patchy areas of caseation

**Conclusion:** Hysteroscopy is an effective procedure for not only diagnosing Asherman's Syndrome, but is equally effective for treating it (JPMA 57:553:2007).

### **Introduction**

Asherman's Syndrome is an acquired uterine disease, characterized by the formation of adhesions (scar tissue) in the uterus. In many cases the front and back walls of the uterus stick to one another. In other cases, adhesions only occur in a small portion of the uterus. The extent of the adhesions defines whether the case is mild, moderate or severe. The adhesions can be thin or thick, can be spotty in location, or can be confluent. They are usually not vascular, an important attribute that helps in treatment. These intrauterine synechiae are broken either blindly or under fluoroscopic guidance or directly under vision by a hysteroscope.

Hysteroscopy has evolved into a therapeutic approach from a diagnostic procedure and plays an important role in the management of Asherman's syndrome. Asherman's syndrome (intrauterine adhesions) are most commonly caused by infections or iatrogenic uterine trauma and this diagnosis is suspected in women with a history of amenorrhoea or oligomenorrhoea not responsive to hormonal treatment, and infertility.

Hysterosalpingography can help in the diagnosis but hysteroscopy confirms the diagnosis and also the type and extent of adhesions. It can also subsequently treat it by

breaking the adhesions, with minimal trauma.<sup>1,2</sup>

Blind adhesiolysis can increase the raw area within the uterine cavity thereby worsening the condition and further distorting the cavity.

This study was undertaken to confirm the diagnosis of Asherman's syndrome in patients with scanty menses / amenorrhoea or infertility and to assess the effectiveness of hysteroscopy in the treatment of Asherman's syndrome.

### **Patients and Methods**

This was a hospital based descriptive study of one and half year, where patients coming to outpatient department for complaints of secondary amenorrhoea, oligomenorrhoea, or infertility were selected following all routine investigations and ruling out systemic diseases or hormonal imbalances. These patients were given a cyclical course of oestrogen and progesterone but were found to be non-responsive. The short listed patients then underwent hysterosalpingography to detect uterine pathologies and tubal patency.

A total of 20 patients were selected for Hysteroscopy after ruling out hormonal imbalance, premature ovarian failure and congenital uterine abnormalities.

A hysteroscope is a thin telescope like fibroptic

device inserted into the uterus through the vagina and cervix which enables direct visualization of the endometrial cavity and tubal ostia. An operative hysteroscope allows the physician to diagnose, take a targeted specimen and perform various surgical procedures such as adhesiolysis, myomectomy and endometrial resection.<sup>3,4</sup>

All the patients selected for our study were admitted a day prior to the procedure. At midnight Tablet Mesoprostol 200ugm was inserted in the vagina along the posterior fornix to soften the cervix.

Hysteroscopy was carried out in the lithotomy position under General Anaesthesia. After a bimanual examination, the anterior lip of cervix was held by a volsellum to stabilize the uterus. All the patients required cervical dilatation which was done by Hegar's dilators up to 8 - 10mm.

Diagnostic hysteroscopy was initially carried out by a rigid hysteroscope (Karlstorz). Resection was done by a resectoscope size 20. with Xenon light. Diathermy was used with cutting on 85 and 1.5% Glycine was used as distending medium.

The telescope was gently introduced through the cervix and advanced under direct vision through the endocervical canal into the cavity of the uterus. The distension fluid flow was regulated by uromat. The uterine cavity was inspected and cornual ends of the tubes were examined.

Adhesions were found in all the patients varying from flimsy adhesions which were broken by simply forcing the fluid into the cavity, and with tip of the hysteroscope but thick fibrous bands had to be resected and cut by resectoscope. The debris and endometrium was collected and removed by sponge holding forceps and curette and was sent for histopathology and AFB culture.

Postoperatively a foley's catheter size 16 was inserted and balloon inflated into the uterine cavity to press the bleeding points and keep the uterine walls apart. After 24 hours the foleys catheter was replaced by multiload IUCD for 3 months to prevent adhesions from forming again. These patients were also kept on cyclical hormonal therapy for 3 months (premarin 0.625mg for 14 days and Primolut 5mg TDS added in the last 7 days.

## Results

The mean age of patients was  $26.1 \pm 3.18$  years. Out of 20 patients, 13 (65%) presented with secondary infertility with scanty menses for an average duration of 3.5 years, 4 (20%) presented with secondary amenorrhoea and 3 (15%) patients presented with primary infertility.

According to their past history four (20%) patient

had a past history of tuberculosis 10 (50%) had undergone dilatation and curettage, 3 had a previous caesarean section, whereas 3 patients had an intrauterine contraceptive device placed in the past.

Hysteroscopic findings in the twenty patients showed thick fibrous adhesions in 9 (45%), 8(40%) had filmy adhesions whereas only 3 (15%) had muscular adhesions.

It was observed that 13 (65%) patients had adhesions in the body of uterus, 5 (25%) had adhesions at the site of internal os, while only 2 (1%) had adhesions in the cervical canal as well as the body of the uterus.

There were no complications associated with Hysteroscopic procedure in 19 patients however in one patient, a false passage was created during dilatation of stenosed cervix, so the procedure had to be abandoned, and was later carried out successfully after 8 weeks.

Dense fibrous tissue was seen in 35% patients with few patches of calcification and no signs of secretory or proliferative cells. In 45%, endometrium showed proliferative changes and collagen fibers. Only 1 patient had a positive TB culture and the histopathology showed few granulomas with epitheloid cells and necrotic tissue with patchy areas of caseation

Nineteen (95%) patients were followed up for 6 weeks, and 17 (85%) for 6 months. One patient was lost to follow up. Normal menstrual cycle was resumed in 95% patients. Two patients conceived, however one of them had a missed abortion and the other one was followed up to term and delivered an alive baby.

## Discussion

Hysteroscopy is a new endoscopic approach for the gynaecologist. Intra Uterine adhesions can be accurately mapped and classified and synechiae can be lysed under direct vision.<sup>5</sup>

For cervical ripening we used mesoprostol (200µg) which softened the cervix, however in a study by Chen et al<sup>6</sup> Laminaria tents were used to distend the uterine cavity prior to transcervical resectoscopy

Different Hysteroscopic techniques have been described, we used the resectoscope with monopolar diathermy, however Bipolar probe<sup>7</sup> is also being used. Adhesions can also be divided by Hysteroscopic scissors (value & sciarra).<sup>8</sup>

Protopapas et al<sup>9</sup> described a new hysteroscopic technique for severe Asherman's syndrome where seven patients with secondary infertility associated with amenorrhoea or oligomenorrhoea were treated with six to eight longitudinal incisions made into the myometrium

extending from the uterine fundus to the isthmus with a resectoscope having a Collins knife electrode. This resulted in restoration of menses, relief of Pelvic pain and three women conceived. They concluded that Hysteroscopic myometrial incisions enlarged uterine cavity size, improved menstrual function and reproductive performance.

In a study by March et al<sup>10</sup> on sixty-six patients with Asherman's syndrome complete lysis of adhesions was accomplished during the initial hysteroscopy on an outpatient basis under local anaesthesia in 65 patients. Uterine perforation occurred in two patients. The extent of the intrauterine adhesions correlated with the patients' presenting menstrual patterns which was also seen in our study. After the surgery 98 per cent had normal spontaneous menses, which is again similar to our study. Seven of these patients conceived and the pregnancies were uncomplicated.

In our study, 13 (65%) patients had adhesions in the body of uterus and 5 (25%) at the internal os. After hysteroscopic adhesiolysis, repeat dilatation was not required, Lodhi, R Sohail<sup>11</sup> in a three year study found 17 cases of infertility due to cervical stenosis who were treated with hysteroscopy. The initial procedure was followed by repeated cervical dilatations at 1-3 week intervals. The stenosis was corrected in all 17 (100%) cases proving that hysteroscopy was found essential for treating cervical stenosis under vision.

In our study intrauterine adhesiolysis was performed in (95%) patients and the procedure had excellent results and high patient acceptability. Direct visualization allowed direct lysis. Following cyclical hormonal therapy 95% patients in our study resumed normal menstrual cycle which is more than 76.6% given by Noorani KJ.<sup>1</sup>

Two patients 10 % in our study conceived which proves that Hysteroscopic surgery offers increased fertility out come and prevents open surgery.<sup>12</sup>

Fletcher et al<sup>13</sup> found Asherman's syndrome to be an uncommon finding at hysterosalpingography for infertility, though hysteroscopy provide confirmation and treatment

with adhesiolysis.

Patients suffering from scanty or irregular menses are traditionally assessed by dilation and curettage under general anaesthesia. However in most centers the operation is still carried out by junior doctors and complications of the procedure especially fundal perforation with a sound or dilator are frequent.<sup>14</sup> With Hysteroscopy the procedure is performed under vision thereby minimizing the complications associated with a blind procedures.

It is concluded that Hysteroscopy is an effective procedure for diagnosing and treating Asherman's Syndrome.

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