International Journal of Science and Research (IJSR)
ISSN: 2319-7064
SJIF (2022): 7.942

Severe Asherman Syndrome: Secondary Amenorrhoea, Hysteroscopic Management Followed by Fruitful Pregnancy: A Case Report

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Abstract: ***Introduction:*** *Asherman Syndrome occurs when scar tissue forms inside the uterus & or cervix. Primarily occurs following D & E performed for elective termination of pregnancy, a missed or incomplete miscarriage or for retained placenta after delivery with or without hemorrhage, less often it results after D & C for non-obstetrical procedure for excessive bleeding, sampling for endometrial biopsy, removal of endometrial polyps or myomectomy. Deliberate endometrial ablation is done to create scarring to control bleeding in HMB. In developing country it may occur in infections like schistosomiasis or tuberculosis.* ***Aims & Objectives:*** *The chances of conception & delivery after surgery are lower in patients with moderate to severe disease but may improve post-surgery if the uterine cavity can be reconstructed & menses resume. A normal appearing uterine cavity may be seen after repeated surgeries but resumption of normal appearing endometrial lining may lag behind after surgery or may not recur at all. Asherman Syndrome can result in recurrent miscarriages /pregnancy loss despite surgery and treatment. Recurrence of adhesions can be seen even after adhesiolysis. Hysteroscopic adhesiolysis may be a game changer in this scenario and can bring smiles to the subfertile couples.* ***Materials & Methods:*** *In this case TVS and hysteroscopy were used to diagnose Asherman's syndrome after proper hormonal assay to rule out other causes of subfertility. Hysteroscopic Adhesiolysis was done to reconstruct the Uterine cavity. Tubal patency was confirmed by laparoscopic dye test & later on by HSG.* ***Results:*** *Our patient was fortunate enough to conceive after hysteroscopic adhesiolysis ,despite moderate to severe adhesions with secondary amenorrhoea for 6 months.* ***Discussion & Conclusion:*** *Asherman's Syndrome can result in obstetric complications like Pre-term labour, Low birth weight and placental complications including retained placenta & Placenta Accreta Spectrum(PAS). Our patient was a victim of PPROM at 31 weeks. Primary prevention of Asherman Syndrome stems from Public Awareness Programme about contraception with KAP (Knowledge Attitude Practice) & promotion of Medical Method of Abortion. Although Dilatation and Curettage is the most frequent method of removing Retained Product of Conception, hysteroscopic removal causes minimal damage. Thus diagnosis & management of Asherman Syndrome requires interdisciplinary co-ordination of Gynaecological Endoscopic Surgeon, Radiologist & Obstetrician along with Neonatologist.*

Keywords: Asherman Syndrome, Hysteroscopy, Synaechiolysis, PPROM

1. Introduction

Primary prevention of Asherman Syndrome stems from Public Awareness Programme about contraception with KAP (Knowledge Attitude Practice) & promotion of Medical Method of Abortion. Although Dilatation and Curettage is the most frequent method of removing Retained Product of Conception, hysteroscopic removal causes minimal damage. Thus diagnosis & management of Asherman Syndrome requires interdisciplinary co - ordination of Gynaecological Endoscopic Surgeon, Radiologist & Obstetrician along with Neonatologist.

Asherman Syndrome (intrauterine adhesions or synechiae) occurs when scar tissue forms inside the uterus & or Cx

Etiology: Primarily occurs following D&C performed for elective termination of pregnancy, a missed or incomplete miscarriage or for retained placenta after delivery with or without hemorrhage, less often it results after D & C for non - obstetrical procedure for excessive bleeding, sampling for endometrial cancer, removal of endometrial polyps or myomectomy.1 Deliberate endometrial ablation is done to create scarring to control bleeding in HMB (heavy menstrual bleeding). In developing world it may occur in infections like schistosomiasis or tuberculosis.

Epidemiology: It may remain underdiagnosed as it is unrecognized in women, not trying to conceive since they may not detect or be concerned about hypomenorrhoea & it is usually missed by routine examinations & USG. But incidence can be upto 13% & 30% in 1st & 2nd trimester MTP respectively & can be as high as 23% in repeat procedures within 2 - 4 weeks.2
It is present in 1.5 % of HSG for infertility, 5% - 39% in Recurrent miscarriage, 31% - 46% in initial & subsequent hysteroscopic resection of leiomyoma

Pathophysiology: It occurs due to trauma or removal of basal layer of endometrium in opposing areas within the endometrial cavity, inducing inflammation and adhesive bands which are usually avascular

Abnormal placentation, penetrating below the basal layer can trigger Asherman Syndrome[3]. According to the extent of adhesion it is defined as mild, moderate & severe and adhesions can be thin, thick, spotty or confluent.

Staging the severity of Asherman as per American Fertility Society

1) Mild - few filmy adhesions involving $<^1/_3$ of uterine cavity with normal menses or hypomenorrhoea
2) Moderate - filmy & dense adhesions involving $^1/_3$ to $^2/_3$ of uterine cavity with hypomenorrhoea
3) Severe - dense adhesions involving more than $^2/_3$ of uterine cavity with amenorrhoea

It has been inferred that Asherman's Syndrome has constitutional component as it is present only in a fraction of patients undergoing endometrial instrumentation and also in patients without preceding endometrial insult.4 It is also postulated that the vulnerable time in the post - partum period when the process of curettage can incite maximal damage to endometrium are 2nd, 3rd & 4th post - partum weeks.

2. Clinical Findings

Patients may have scanty periods or secondary amenorrhoea or at times normal periods depending upon the extent of affection of endometrial surface. In cases of scarred Cx tissue, patients may present with dysmenorrhea due to outflow tract obstructive features. Asherman Syndrome may present with subfertility & recurrent miscarriage due to deficient endometrium & implantation failure.

Failure to respond to Estrogen & Progesterone Challenge in secondary amenorrhoea with normal HPO Axis & other hormone profile points towards diagnosis.2D USG may suggest Asherman but it is better evaluated with SIS or HSG, with sensitivity of 75%.5 MRI may be required in total obliteration . Hysteroscopy remains the gold standard for diagnosis of the extent of the disease with simultaneous treatment.

3. Case Report

A 31 year old P0A1L0 had visited our OPD with H/O secondary amenorrhoea of 6 months following a Dilatation & Curettage after a miscarriage in an outside clinic. She was of average built, euthyroid, normotensive, euglycaemic with no H/O of Tuberculosis & desperately keen to conceive. She had no other significant past medical, surgical or family history. Her serum TSH, Cortisol, FSH, Prolactin levels, Growth Hormone levels were within limits. She had failed to resume her menses with previous 6 cycles of low dose COCP. She was advised a HSG & SIS.

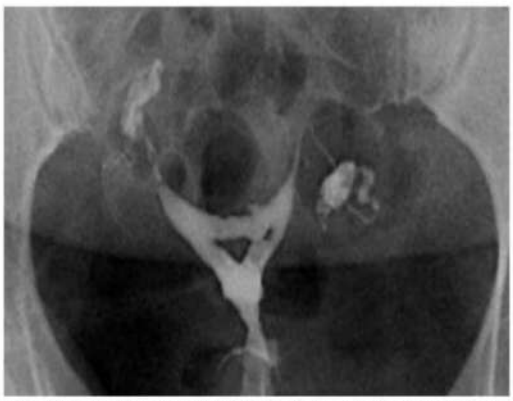

Figure 1A: Hysterosalpingography depicting uterine synechiae

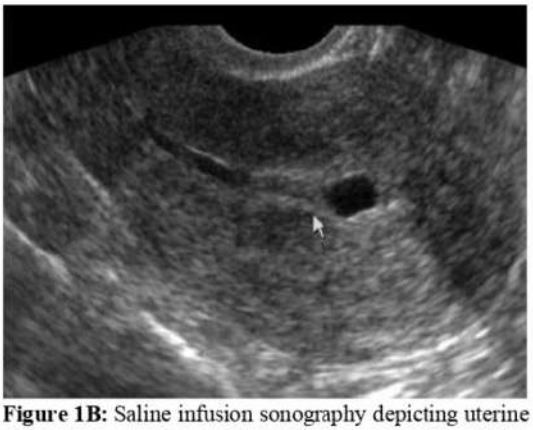

Figure 1B: Saline infusion sonography depicting uterine synechiae

We planned a hysteroscopic evaluation & further management after full pre - operative management. Hysteroscopy revealed severe form of intra - uterine adhesions which was lysed with hysteroscopic scissors. Cu - T was gently inserted in the reconstructed uterine cavity. Diagnostic laparoscopy was done to exclude any inadvertent injury due to false passage.

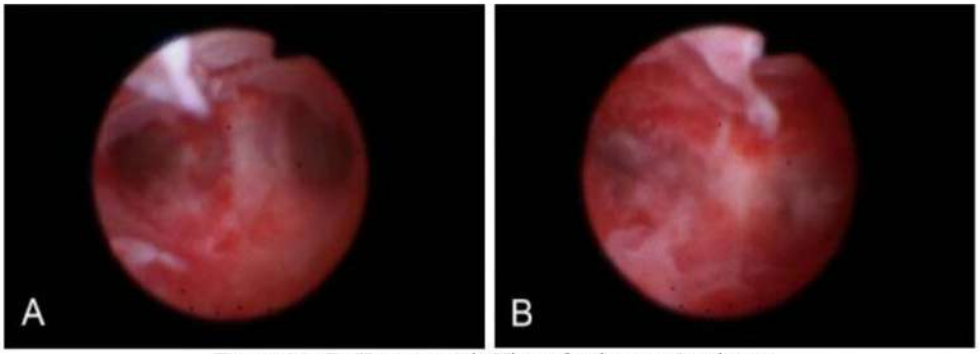

Figure 2A+B: Hysteroscopic View of Asherman Syndrome

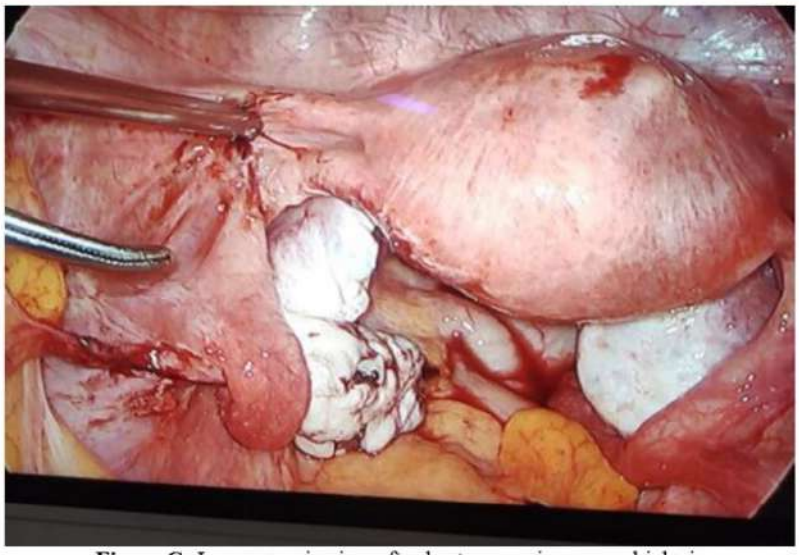

Figure C: Laparoscopic view after hysteroscopic synnaechiolysis

Patient was advised OCP containing Ethinyl Estradiol - 50mcg for consecutive 84 days. Menses resumed after 9 months of secondary amenorrhoea. Ovulation induction was done with Letrozole 2.5mg, 5mg, 7.5mg given respectively in 3 consecutive cycles from D3 - D7 & Luteal Phase Support was provided with Dydrogesterone. She conceived within 3 months of induction.

Pregnancy suferred Threatened Miscarriage at 6 weeks of gestation so was sustained with 300mg of vaginal Progesterone & weekly IM Inj.500mg of 17OHPC upto 20 weeks. Pregnancy continued uneventfully till 30 weeks but PPROM occurred at 31weeks. Inj. MgSO4 & Inj. Dexamethasone were given antenatally for neuroprotection & lung maturity. Emergency LSCS was planned with elaborate counselling for anticipated challenging perinatal outcome. A 1.7 kg female baby was delivered abdominally & was shifted to Level 3 NICU & received invasive ventilatory support & surfactant therapy. Baby was released in stable condition after 3 weeks.

Baby is now 3 years old with normal growth & development.

4. Conclusion

The chances of conception & delivery after surgery are lower in patients with moderate to severe disease but may improve post surgery if the uterine cavity can be reconstructed & menses resume. A normal appearing uterine cavity may be seen after repeated surgeries but resumption of normal appearing endometrial lining may lag behind after surgery or may not recur at all.6
Asherman Syndrome can result in recurrent miscarriages /pregnancy loss despite surgery and treatment. Recurrence of adhesions can be seen even after adhesiolysis.7

Our patient was fortunate enough to conceive after hysteroscopic synaechiolysis, despite moderate to severe adhesions (as per AFS) with secondary amenorrhoea for 6 months.

Asherman's Syndrome can result in obstetric complications like Pre - term labour (PTL), Low birth weight (LBW) and placental complications including retained placenta & Placenta Accreta System (PAS) [8]. Our patient was a victim of PROM at 31 weeks.
Although the risk of Endometrial CA in women with Asherman Syndrome may be lower than general population but it can occur in the peri - menopausal phase but AUB may be missed due to scarring or Cx obstruction and these patients may be closely monitored by Transvaginal Sonography.

Primary prevention of Asherman Syndrome stems from Public Awareness Programme about contraception with KAP (Knowledge Attitude Practice) & promotion of Medical Method of Abortion (MMA). Although Dilatation and Curettage (D&C) being the most frequent method of removing Retained Product of Conception (RPOC), hysteroscopic removal causes minimal damage.

Thus diagnosis & management of Asherman Syndrome requires interdisciplinary co - ordination of Gynaecological Endoscopic Surgeon, Radiologist & Obstetrician along with Neonatologist.

Conflict of Interest: None

Funding: None

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