

Role Of Hysteroscopy In The Management Of Retained Products Of Conception And Its Satisfaction

Dr. Kale Dhana Laxmi¹, Dr. Avisha Malu², Dr. Shiraj Katakdhond³, Dr. Meenal Patvekar^{4*}

¹Junior Resident, Dept of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune, India. Email Id: ldhana96@gmail.com

²Junior Resident, Dept of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune, India, Email Id: maluavisha@gmail.com

³Associate Professor, Dept of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune, India. Email Id: dr.shrirajsk@gmail.com

^{4*}Professor, Dept of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune, India. Email Id: mpatvekar@gmail.com

***Corresponding Author:** Dr. Meenal Patvekar

^{*}Professor, Dept of Obstetrics and Gynaecology, Dr. D.Y. Patil Medical College, Hospital and Research Centre, Pimpri, Pune, India. Email Id: mpatvekar@gmail.com

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Abstract

Aims: To assess the efficacy and patient satisfaction undergoing hysteroscopy in the management of retained products of conception (RPOC).

Material and Methods: The study was conducted on 60 patients for 2 years. After 6 weeks of hysteroscopic removal of RPOC, patients were followed up for repeat ultrasonography for the completeness of procedure and satisfaction was evaluated with the help of a questionnaire.

Results: Different methods of hysteroscopic removal of RPOC were done in 60 patients with the use of scissors with grasper, 27 Fr resectoscope with or without energy. After 6 weeks of hysteroscopic removal of RPOC, our success rate was 86.66%. Patient satisfaction survey was also evaluated and was 81.66%.

Conclusion: Hysteroscopic is the most ideal way an RPOC should be removed. Our study showed 86.66% success rate and satisfaction rate of 81.66%. Dilatation and Curettage should not be done for a focal pathology like RPOC as it can inadvertently damages the endometrium causing adhesion and impairs infertility. The new generation of gynaecologists now should undergo training in hysteroscopy which is the tool for diagnosis of intra-uterine pathology.

Keywords: Retained products of conception (RPOC), Gutenberg classification, Hysteroscopy, Patient satisfaction.

INTRODUCTION

Retained products of conception (RPOC) are defined as the presence of any tissue (placental or fetal) that remains inside the uterine cavity after delivery or termination of pregnancy.^[1,2]

The incidence of RPOC differs from different studies. In one prospective study by Hoveyda F et al, incidence of RPOC after spontaneous or elective abortion was found to be 64.4%. After vaginal delivery (13.3%) and caesarean delivery (11.1%) were less frequently seen^[1].

The likelihood of RPOC can be associated with certain risk factors like nulliparity, maternal age, previous history of abortion (induced or spontaneous), induction of labor, uterine surgery in the woman's history^[2]. Early detection and treatment are the key because longer the RPOC persists in the uterus, more is the impact on fertility.

The common symptom of RPOC is vaginal bleeding, other frequent symptoms are fever, pelvic pain, subsequent postpartum haemorrhage (PPH). History and clinical examination can give a high index of suspicion. However, the symptom of vaginal bleeding of RPOC can be confused with bleeding occurring post-partum and post-abort period, due to which diagnosis can be challenging.

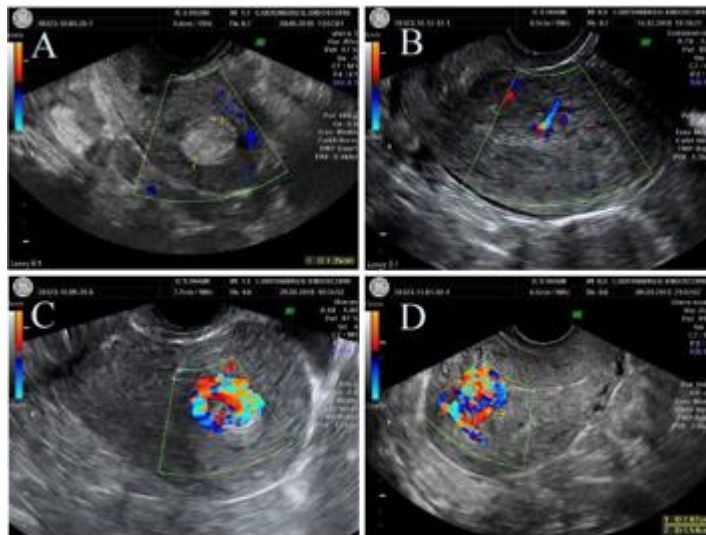
Other diagnostic modalities for the diagnosis of RPOC are ultrasound, which is the dominant investigation, doppler imaging, magnetic resonance imaging.

The diagnosis by ultrasound can be typically made, as it reveals a presence of echogenic mass or hyperechoic material with sensitivity of 78%, specificity of 100%^[2], thickened endometrium, increased vascularity on colour doppler.^[3]

The value of doppler increases the precision of the diagnosis because it may be utilized to show flow of blood within the RPOC, which assist to differentiate RPOC and hematomas and categorize RPOC according to its vascularity.^[4]

Gutenberg et al. classification contribution to diagnosis of RPOC is immense. His classification is highly beneficial for surgical planning because it makes, it possible to forecast the danger during the hysteroscopic removal of RPOC and, consequently, for choosing the safest setting for the procedure.^[5]

The Gutenberg classification^[5] is as follows (FIGURE-1)



Type 0: Hyper echogenic avascular mass

Type 1: Different echoes with minimal or no vascularity

Type 2: High vascularized mass confined to the cavity

Type 3: High vascularized mass with highly vascularized myometrium.

The treatment depends upon patient's hemodynamic condition, the amount of retained products retained, gestational age at the time of presentation and the experience of the physician.

In an era of evidence-based medicine dilatation and evacuation is a blind procedure where the clinician is unable to see the uterine cavity at all. It has been practised for 150 years and is the commonest way to treat RPOC surgically. It has its own complications i.e., incomplete evacuation, haemorrhages, perforation, intrauterine synechiae which have a great impact on fertility of the patient.^[6]

To reduce the above complications, the evolution of hysteroscopy for the management of retained products of conception has gone and moved ahead to an easy directed and safe method.

Hysteroscopic diagnosis and management has now proven to be beneficial in treatment of RPOC. RPOC is a focal pathology in the uterus which does not require a curetting of entire uterine cavity. Hysteroscopy aids in complete removal of RPOC by direct visualisation of placental remnants without damaging the adjacent endometrium, and in this way avoids excessive and unneeded uterine curettage, which causes intra uterine adhesions and hampers fertility. Time taken to perform hysteroscopy removal of retained products is lower in comparison to dilatation and evacuation under anaesthesia.⁽⁷⁾

There are different hysteroscopic methods in the management of RPOC: semi rigid scissors, semi rigid grasper, resectoscope without current, resectoscope with monopolar and bipolar current.

Various studies have been carried out to determine satisfaction of hysteroscopy in the management of RPOC. Our study is yet another effort to better understand the relation of various factors on satisfaction during hysteroscopic management of RPOC over dilatation and evacuation.

METHODS

This prospective observational done at tertiary care hospital on "Role of Hysteroscopy in the management of Retained products of conception and its satisfaction" from August 2020 to July 2022. The patients were assessed and analysed. Patients gave their consent after being fully informed, and the study methodology was approved by the institutional ethics committee

Using a pretested proforma that matched the study's goals, data was collected. All patients who met all inclusion and exclusion criteria were chosen after being verified with the thorough clinical history, physical exam, and ultrasound. Using the Gutenberg classification, the size and grade of the RPOC, ranging from type-0 to type-3, were determined during transvaginal ultrasonography on the patient. Hysteroscopy was used to confirm the presence and size of RPOC. The vaginoscopic technique, which Betocchi and Selvaggi first reported in 1997, was used during hysteroscopy. The procedure was carried out using a rigid Hopkins type II 2.9 mm scope with a 4.3 mm outer sheath diameter made by Karl Storz. The pressure range of 60 to 120 mmHg, normal saline was as the displacing medium. Based on the size of RPOC

on ultrasonography and hysteroscopy, selection of the type of instrument i.e., scissors with grasper or 27 Fr bipolar Resectoscope was done.

Inclusion Criteria:

- Previous abortion
- Spontaneous abortion
- Medical abortion

Exclusion Criteria:

- Hemodynamically unstable patients
- High grade fever
- Any medical or surgical illness (hypertension, uncontrolled diabetes)
- Severe active vaginal bleeding
- Cardiovascular disease (arrhythmias and ischemia) ,Acute inflammatory disease

A well-informed consent was taken from the patient where she is educated and counselled about the process of procedure, indications, complications and prognosis. The equipment is assembled in the procedure room (scissors with grasper, 27 Fr Bipolar resectoscope) and the patient is asked to empty the bladder. Once everything is ready the patient is placed in a lithotomy position. The surgeon introduces the hysteroscope by vaginoscopic technique. Depending upon the grade of RPOC and the size of RPOC, scissors with grasper or the 27 Fr bipolar resectoscope loop was used to remove the retained products. No use of current was done.

The remains were subsequently removed in pieces without employing electrocautery by using the resectoscope's loop as a curette. Although electrocautery was attempted to be avoided in every scenario, bipolar was used when it became problematic because to RPOC's strong adhesion to the uterine wall and the resulting severe bleeding.

Patient satisfaction questionnaire is designed and was given to the patients 6 weeks after the procedure when they for repeat ultrasonography after 6 weeks. The patients were also surveyed for satisfaction and results were evaluated with the help of questionnaire.

SATISFACTION QUESTIONNARE

PATIENT SATISFACTION SCORE FOR HYSTEROSCOPY.

TO WHAT EXTENT DO YOU AGREE WITH THE FOLLOWING? TICK ONE BOX FOR EACH QUESTION WHERE: -

1= Strongly agree, 2=Agree, 3= No opinion

QUESTIONS	1	2	3
I am satisfied with the procedure			
I had no work loss			
I had a very good pre-operative counselling			
I had procedural satisfaction			
Completeness of procedure			
I had no post-operative complications			
I would undergo this procedure again if required			
I would recommend this procedure to a friend / other patients in need			

Total score - 24

Score

1-8- highly satisfactory

9-14 – moderately satisfactory

15-19- mildly satisfactory

20-24- not satisfied

The patient is discharged the same day and called for a follow-up ultrasonography after 6 weeks to see the completeness of procedure and patient satisfaction were evaluated.

RESULTS:

Table 1: Patient characteristics.

Objectives	Mean , SD Value
Age, years (mean, SD, range)	32.8 ± 4.2 (32-60)
Parity	
Primigravida	45(75%)
Multigravida	15(25%)

The mean age in our study was 32.8 +/- 4.2 years old. Out of 60 cases evaluated, majority of the cases, 75% were primigravida and 25% were multigravida.

Table 2: RPOC based on Gutenberg Classification.

GUTENBERG CLASSIFICATION	FREQUENCY	PERCENTAGE
Type 0	34	56.66%
Type 1	22	36.66%
Type 2	3	5%
Type 3	1	1.6%

Out of 60 cases evaluated, maximum cases were of type 0 comprising of 56.66% followed by 36.66% patients were type 1, type 2 comprising of 5% and type 3 of 1.6% patients.

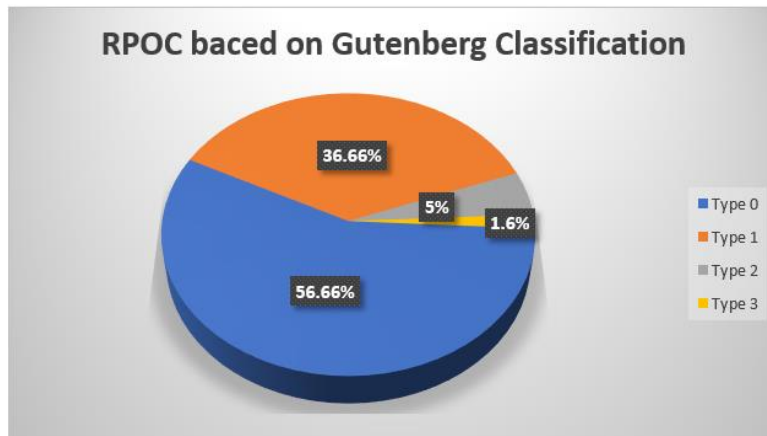


Table 3: Previous Type of Abortion.

HISTORY OF ABORTION	PERCENTAGES
Spontaneous Abortion	31 (59.6%)
Medical Abortion	11(18.3%)
Surgical Abortion (D & C)	10(16.6%)

Out of these cases, majority i.e., 59.6% underwent no prior treatment (spontaneous abortion), 18.3% had received medical treatment in the form of methergine or misoprostol and 16.66% patients prior had undergone D&C. Patient previously did not undergo hysteroscopic resection.

Table 4: Satisfaction score

SATISFACTION SCORE	NUMBER OF CASES	PERCENTAGE
1-8	49	81.66%
9-14	2	3%
15-19	1	1%
20-21	0	0

After 6 weeks of hysteroscopic removal of RPOC, 52 patients were followed up and repeat ultrasonography was done which did not show features suggestive of RPOC indicating complete removal of RPOC. There were no post-operative complications in these patients. Our success rate was 86.66% and we lost 8 patients of follow-up after 6 weeks. Patient satisfaction survey was also evaluated after 6 weeks.

DISCUSSION

Traditionally, D & C was practiced more than 150years for the treatment of RPOC. Hysteroscopic has of great value in diagnosis and management in treatment of RPOC. Hysteroscopy aids in complete removal of RPOC by direct visualization of placental remnants without damaging the adjacent endometrium, and in this way avoids excessive and unneeded uterine curettage, which causes intra uterine adhesions and hampers fertility.

The data in this study revealed the mean age of patients was 32.8 +/- 4.2 years old. Out of 60 cases evaluated, majority of the cases, 75% were primigravida and 25% were multigravida.

A prospective observational study was done on 100 patients by Pushpalata kumari in India in 2017, mean age in the study was 28.44. Out of 100 patients 48% were primigravida and 52% in the study were multigravida^[8].

Out of those cases who gave a history of prior abortion, majority of 59.6% underwent no treatment (spontaneous abortion), 18.3% had received medical treatment in the form of methergine or misoprostol tablets and 16.66% patients have undergone D&C.

In a related study carried out in 2013 at Centro Gutenberg in Malaga, Spain, 64% of the cases were those of abortions, and 47% patients who had failed previous medical treatment^[9].

The study revealed satisfaction rates of 81.66% were highly satisfied, 3% were moderately satisfied and 1% were mildly satisfied.

In a study done by Perrine Capmas on efficacy of operative hysteroscopy was 91%^[10] for retained products of conception. Thus, in our study, we practiced the use of hysteroscopic scissors, resectoscope without current, resectoscope with bipolar for the management of RPOC. No use of current was done. The remains were subsequently removed in pieces without employing electrocautery by using the resectoscope's loop as a curette. Although electrocautery was attempted to be avoided in every scenario, bipolar was used when it became problematic because to RPOC's strong adhesion to the uterine wall and the resulting severe bleeding. In all these cases, normal saline was used distention media

A total of 60 women underwent hysteroscopic removal of RPOC: Out of 60 patients, 41 underwent hysteroscopic removal of RPOC by grasper and scissors, 14 people underwent hysteroscopic removal by 27 Fr bipolar resectoscope without energy, 4 patients underwent hysteroscopic removal by 27 Fr bipolar resectoscope with cold loop energy when the RPOC were firmly adherent to endometrium. One patient was referred to interventional radiologist due to increased vascularity of RPOC with arteriovenous malformation for the need of uterine artery embolization

After 6 weeks of hysteroscopic removal of RPOC, patients were followed up for repeat USG. Out of 60 patients, 52 patients have undergone repeat ultrasonography which did not show any features suggestive of RPOC with 86.66% success rate of hysteroscopic removal of RPOC and we lost 8 i.e., 13.33% patients of follow-up after 6 weeks.

No complications were noted in our study.

CONCLUSION:

Hysteroscopic diagnosis and management of RPOC is the most ideal way an RPOC should be removed. Our study showed 86.66% success rate. Dilatation and Curettage (D & C) which has been practised for more than 150 years should not be done for a focal pathology like RPOC as it can inadvertently damages the surrounding endometrium causing adhesion and impairs infertility. Our study also shows high satisfaction rates of 81.66%. The new generation of gynaecologists now should undergo training in hysteroscopy which is going to be the tool for diagnosis of intra-uterine pathology.

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