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# CODEN [USA]: IAJPBB

ISSN: 2349-7750

# INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

http://doi.org/10.5281/zenodo.3218405

Available online at: <u>http://www.iajps.com</u>

**Research Article** 

# TO COMPARE PATIENTS SATISFACTION BETWEEN MANUAL VACUUM ASPIRATION AND CURETTAGE IN FEMALE WITH MISSED MISCARRIAGE

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| Article Received: March 2019   | Accepted: April 2019  | Published: May 2019   |  |  |  |
|--|---|---|--|--|--|
| Abstract:  |   |   |  |  |  |
| <b>Background:</b> Miscarriage is the spontaneous<br>common and thought to be very much succ<br>interventional and unease and requires experti-<br>manual vacuum aspiration method is introduc   | loss of a pregnancy prior to viab<br>essful in complete evacuation of<br>se and time moreover. With the ad-<br>ed to manage miscarriage or miss | wility. Dilatation & Curettage is most<br>f conception material. But D&C is<br>vancement of science and technology,<br>sed abortions. |  |  |  |
| <b>Objective:</b> To compare patients satisfaction betwith missed miscarriage  | tween manual vacuum aspiration of   | and Dilatation & curettage in females   |  |  |  |
| Study Design: Randomized Controlled Trial.   |   |   |  |  |  |
| Material & Methods: Department of Obstetri   | ics and Gynaecology, Sir Ganga K  | Ram Hospital, Lahore:   |  |  |  |
| <b>Data Collection:</b> Sample size of 300 cases (150 each) was included and divided randomly into two groups. In group <i>A</i> , D&C was done and in group <i>B</i> , MVA was done. Patients' satisfaction for MVA and D&C was assessed immediately after procedure. All this information was recorded on proforma |   |   |  |  |  |
| <b>Results:</b> The mean age of the patients was 23<br>weeks. In this study 184 patients were satisfied<br>and 71 (47.3%) were from D&C group. Statist   | 3.50±3.63 years. The mean gestan<br>I with the procedure used in which<br>tically significant difference was for                                | tional age of patients was $8.46\pm1.61$<br>h 113 (75.3%) were from MVA group<br>ound in both groups (p =0.000).                      |  |  |  |
| <b>Conclusion:</b> It was concluded through results of this study that MVA is more successful in achieving patients' satisfaction as compared to D&C.  |   |   |  |  |  |
| Keywords: Miscarriage, Missed Abortion, Di   | lation & Curettage, Manual Vacu   | um Aspiration, Patient Satisfaction.  |  |  |  |
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Please cite this article in press Asia Sharif et al., **To Compare Patients Satisfaction between Manual Vacuum** Aspiration and Curettage in Female with Missed Miscarriage., Indo Am. J. P. Sci, 2019; 06(05).

### **INTRODUCTION:**

Miscarriage or spontaneous abortion is the spontaneous loss of a pregnancy prior to viability (where the embryo or fetus is incapable of surviving independently) taken generally in the UK as a gestation date 23 weeks 6 days. [1] Unsafe miscarriage related complications result in about 10-13% maternal deaths in developing countries. Approximately 200,000 women are being treated annually in our country for complications of miscarriage. Safe and cost effective method for complete uterine evacuation has always been a priority to overcome the complications of miscarriage. [2]

Different medical and surgical methods are currently available for evacuation and include dilatation and curettage (D&C), manual vacuum aspiration (MVA), electrical vacuum aspiration (EVA), medical evacuation with misoprostol and expectant management. [3] A high efficacy of vacuum aspiration with success rate between 95-100% has been reported in various trials. [4]

One study reported that complete evacuation was noted with D&C was 80% and less time consumption was noted in 16% cases only while MVA reported significantly higher rate i.e. 92% and less time consumption in 92% cases. [5]

Various studies are done to show the comparison between MVA and D&C on the basis of safety and cost effectiveness while as far as patient satisfaction is concerned unfortunately no standard data is available. In one study patients' satisfaction rate found to be 70% for MVA. [6]

Patients remained unsatisfied despite effective treatment hence increasing workload on hospital as well as especially in our Era where health care facilities are already insufficient. In pilot study patients' satisfaction with D&C is 56%. As no data is available in previous literature so pilot study was conducted with 25 patients and criteria for patient satisfaction was following questions: [7]

She will recommend the procedure to others.
 Whether she will opt the same procedure whenever she will need in future.

That is why aim of my study is based thoroughly on patients' satisfaction after MVA vs D&C.

#### **Objective:**

To compare patients satisfaction between MVA and Dilatation and curettage in females with missed miscarriage.

#### **MATERIALS AND METHODS:**

Study Design: Randomized controlled trial.

**Setting:** Department of Obstetrics and Gynaecology Sir Ganga Ram Hospital Lahore.

**Duration of study:** Six months from January, 2014 to July, 2014.

**Sample Size:** Sample size of 300 cases (150 each) was calculated with 80% power of study, 5% level of significance and taking expected percentage of patients' satisfaction i.e. 70% with MVA & 56% with D&C.

**Sample Technique:** Non probability purposive sampling.

# Sample Selection:

### **Inclusion Criteria:**

Patients of age 18-30years having parity <6 with miscarriage before 12 weeks of gestation determined by last menstrual period and confirmed by abdominal ultrasonography.

#### **Exclusion Criteria:**

Patients with uterine fibroids, any bleeding disorder, Diabetes Mellitus (BSR>200gm/dl), Hepatitis B or C, abnormal vaginal discharge, no previous Intervention either Medical or surgical for miscarriage in previous pregnancy, hemoglobin <7gm/dl.

#### **Data Collection Procedure:**

After taking informed consent from ethical committee of the hospital, 300 patients with miscarriage was admitted and enrolled in study from emergency department. Informed consent was taken. Patients were divided randomly into two groups by using lottery methods. In group A, D&C method were applied and in group B, MVA method was applied. D&C were carried out under saddle block and MVA under Para cervical block. The method of using MVA was first to prepare the aspirator. Ask the women to empty her bladder and lie in lithotomy position then perform bimanual examination. After aseptic measures Para cervical block was given with 10-20ml of 0.5%-1.0% lidocaine slowly inject 2-5 ml at 3,5,7,9 o'clock position then do the cervical dilatation if required. Cannula of appropriate size was applied it should fit snugly in to hold vacuum then aspirator was attached and suction of uterine contents were done. Then MVA was disassembled and washed thoroughly and sterilization was done by senior gynecologist, soaking in 0.5% chlorine for 20 minute. D&C were done under saddle block and cervix were dilated with Hager's dilator and evacuation was done with sponge holding forceps followed by gentle curettage. Patients' satisfaction for MVA and D&C was assessed

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immediately after procedure and recorded in a proforma.

#### **Data Analysis:**

Data was entered and analyzed in SPSS (version 15). Mean ± SD was calculated for age. Categorical variable like patients satisfaction Yes No was presented in the form of frequency and percentages. Frequency was calculated for parity as well. Chisquare test was applied for comparison of patient satisfaction in both groups. P-value<0.05 were considered as significant.

#### **RESULTS:**

The mean age of the patients was noted as 23.50±3.63 years. The mean gestational age of the patients was

noted as 8.46±1.61 weeks. Out of 300 patients, 67 (22.3%) were nulliparous, 121 (40.3%) patients were primiparous, 56 (18.7%) had parity two, 31 (10.3%) had parity three, 19 (6.3%) had parity four and 6 (2.0%) had parity five. Table#1

In this study 61.33% patients were satisfied with the procedure used and 38.67% patients were not satisfied with the procedure used. Fig#1

In this study 184 patients were satisfied with the procedure used in which 113 (75.3%) were from MVA group and 71 (47.3%) were from D&C group. Statistically significant difference was found in both groups for patients' satisfaction i.e. p-value=0.000. Table#2

| Tablem 1. Demographics of patients |             |  |  |  |
|------------------------------------|-------------|--|--|--|
| n                                  | 300         |  |  |  |
| Age (Years)                        | 23.50±3.63  |  |  |  |
| Gestational Age (Weeks)            | 8.46±1.61   |  |  |  |
| Nulliparous                        | 67 (22.3%)  |  |  |  |
| Primiparous                        | 121 (40.3%) |  |  |  |
| Two                                | 56 (18.7%)  |  |  |  |
| Three                              | 31 (10.3%)  |  |  |  |
| Four                               | 19 (6.3%)   |  |  |  |
| Five                               | 6 (2.0%)    |  |  |  |

| Table#1: | Demographics | of | patients |  |
|----------|--------------|----|----------|--|
|          |              |    |          |  |



## Fig#1: Patients' satisfaction

| -            |     | Study Groups |            | T-4-1       |
|--------------|-----|--------------|------------|-------------|
|              |     | MVA          | D&C        | 1 otai      |
| Satisfaction | Yes | 113 (75.3%)  | 71 (47.3%) | 184 (61.3%) |
|              | No  | 37 (24.7%)   | 79 (52.7%) | 116 (38.7%) |
| Total        |     | 150 (100%)   | 150 (100%) | 300 (100%)  |

 Table#2: Comparison of patients' Satisfaction in both groups

Chi square=24.79 p-value = 0.000 (Significant)

## **DISCUSSION:**

Dilatation and curettage, electric vacuum aspiration and manual vacuum aspiration are all safe and effective for first-trimester termination of pregnancy. [8] Uterine emptying accomplished via MVA in early pregnancy failure is presented by many authors as an alternative therapy to dilatation and curettage, with the advantage of replacement of general anaesthesia by analgesics or Para cervical block, less complication rate, shortening of hospital stay, the reduction of hospital costs and utilization of fewer resources. [9, 10]

Our study results showed that 184 patients were satisfied with the procedure used in which 113 (75.3%) were from MVA group and 71 (47.3%) were from D&C group, similarly 116 patients were not satisfied with the procedure used in which 37 (24.7%) were from MVA group and 79 (52.7%) were from D&C group. Statistically there is highly significant difference was found between the study groups and satisfaction level of the patients i.e. p-value=0.000.

Vanessa et al., showed found in their study a high level of satisfaction among participants undergoing surgical uterine evacuation for early pregnancy failure in both the office and the operating room. [11]

Farooq et al., showed in their study that the mean duration of the procedure was significantly higher (p<0.0001) in DNC compared to MVA. The duration of hospital stay was significantly lower (p<0.0001) in MVA group. Similarly the cost of procedure was also significantly lower (p=0.0001) in MVA group. [12]

Various other trials reported 95–100% efficacy with MVA. [12,13] Pereira et al., from Brazil, compared efficiency, frequency of complications, duration of the procedure, and duration of hospitalization among

patients undergoing MVA and D&C for incomplete miscarriage. [14]

Electric vacuum aspiration needs less time to perform than dilatation and curettage. Manual vacuum aspiration involves greater procedural difficulty compared with electric vacuum aspiration in cases of late terminations. [8]

The results indicate that vacuum aspiration is safe, quicker to perform, and less painful than sharp curettage, as evidenced by statistically significant findings of decreased blood loss, decreased perception of pain, and a shorter duration of the vacuum aspiration procedure by Verkuyl et al., study 1993. [15]

Milingos et al., concluded in their study that Manual vacuum aspiration is an effective alternative to conventional suction curettage, avoiding general anaesthesia and the need for access to theatre. Complications such as uterine perforation, bleeding and retained products of conception are minimal. It is a safe, easily performed and possibly cost-effective procedure, with advantages for both the patient and the healthcare system. [7]

Gazvani R et al., showed in their study that Manual vacuum aspiration is an option in the management of all first trimester pregnancy losses. Comparisons with other treatment options are indicated. [16]

Although the complication rate due to unsafe abortion in Pakistan is very high, the use of MVA is still very limited. According to Population Council's study, even qualified health professionals from secondary and tertiary-care set-ups reported DNC as the most commonly used method (72%) followed by medical methods. [17]

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Different medical and surgical methods are currently available for evacuation and include dilatation and curettage (D&C), manual vacuum aspiration (MVA), electrical vacuum aspiration (EVA), medical evacuation with misoprostol and expectant management. [3] A high efficacy of vacuum aspiration with success rate between 95-100% has been reported in various trials. [4]

One study reported that complete evacuation was noted with D&C was 80% and less time consumption was noted in 16% cases only while MVA reported significantly higher rate i.e. 92% and less time consumption in 92% cases. [5]

#### **CONCLUSION:**

It was concluded through results of this study that MVA is more successful in achieving patients' satisfaction as compared to D&C. now in future, we are able to implement the use of MVA for management of missed abortion instead of D&C, as we have got local estimates which have obvious results showing more patients' satisfaction with MVA.

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