

A Comparative Study between Suction Evacuation and Manual Vacuum Aspiration for First Trimester MTP

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Abstract

Background: There are four main methods for safe pregnancy termination– D & E, S & E by electric suction machine, MVA, and medical abortion by misoprostol and mifepristone

Objective : To find out the efficacy of MVA, its comparison with Suction & Evacuation for 1st trimester MTP in terms of time taken and various complications. Safe abortion care the public health human rights rationale.

Material & Methods: Prospective randomized study was conducted in Department of Obstetric & Gynaecology at Jawahar Lal Nehru Medical College, Bhagalpur . In this study randomly selected 200 case upto 10 wk pregnancy for MTP were studied.

Group-I: 100 cases underwent MTP by MVA and

Group-II: 100 cases underwent MTP by suction evacuation observations were tabulated and analysed. p value of <0.05 considered as significant.

Results: In our study efficacy of MVA was 98% and by S & E 99%. Blood loss in MVA group was < 20cc in 64% of group-I and 40% in group-II clients. Perforation was seen in 1% in group-II whereas non in group-I.

Conclusion: Study found that both methods have high efficacy but MVA is safe, cost effective, blood loss minimal, less time consuming, portable, Many MTP can

be done in a day to hospital and PHC level which cater target population area.

Key words: MVA, suction & evacuation, abortion.

Introduction

Safe abortion care the public health human rights rationale. Almost in all countries the law permits abortion to save the women's life, preserve physical and mental health of women. There are four main methods for safe pregnancy termination– D & E, S & E by electric suction machine, MVA, and medical abortion by misoprostol and mifepristone. In rural areas there is limited access to medical facilities, non availability of reliable equipment, poor maintenance of available resources and an erratic power. MVA in this setting offers the option of very early abortion with the benefits of minimal use of anaesthetic and low levels of postoperative pain and discomfort being an increasing expectation^[1].

Material & Methods

Prospective randomized study was conducted in Department of Obstetric & Gynaecology at Jawahar Lal Nehru Medical College, Bhagalpur .Total 200 cases were randomly selected from OPD who came for MTP, fulfilling the norms of MTP act.

Pregnancy upto 10 wks taken in our institution Group-I: MTP by MVA and Group-II: MTP by S & E. Patients

were hospitalized on day care basis before 3-4 hrs. patients were NBM since 10.00 pm previous day. Informed consent of the patient taken. Detailed history and thorough general and systemic examination was done along with basic investigations. The duration of pregnancy was calculated from the first day of last menstrual period. Per abdomen, per speculum and per vaginal examinations were done to confirm the duration of pregnancy and to rule out any local infection if present then infection was treated first. Pre-medication was done by Inj. Ceftriaxone 1000 mg, Inj. Glycopyrrolate 0.2mg, Inj. Ranitidine 50 mg, and Inj. diclofenac 75 mg IM.

Steps for Procedure: Create the Vacuum in the syringe or charge the syringe, women taken on OT table after passing urine. Local painting by povidone iodine solution was followed by draping with sterile sheets. Evaluate the uterus by bimanual examination. Speculum inserted to hold the cervix steady with a tenaculum and apply traction to straighten the cervical canal. Infiltrate 2% xylocaine at 5 & 7 O'clock position. Insert the needle just under the epithelium to a depth of 2-3 mm at the cervico-vaginal junction at 5 and 7 O'clock position. Aspirate by the drawing the plunger back to ensure that the needle is not in the blood vessel. Dilated the cervix as required Insert the cannula gently through cervix into the uterine cavity just past the internal os. Push the cannula slowly into the uterine cavity. Attach the prepared syringe to cannula holding the end of the cannula in one hand and the syringe in the other. Release the pinch value (S) on the syringe to transfer the vacuum through the cannula to the uterus. Evacuate the contents of the uterus moving the cannula gently and slowly back and forth within the uterine cavity, rotating the syringe. Check for signs for completion.

Products of conception measured, total amount of blood loss noted and patients were shifted to post operative ward

and kept under observation for 4-5 hrs for bleeding, pain and complication. patients were discharged after 4-5 hrs and instructed to come after 1 wk for follow up or whenever any undue complication arises.

Result

In this study included 200 women selected for first trimester MTP during 1 year period 100 women underwent for MTP by MVA method (group I) & 100 women underwent with S & E method (group II) In MVA group, 38 % were 25-29 yrs and in S & E group ,40 % were 25-29 yrs. 48% women went MTP with 2 living children in S & E group.

Age (In year)	Group-I (MVA) n=100		Group-II (S & E) n=100	
	No.	%	No.	%
< 20	9	9%	10	10%
20-24	24	24%	25	25%
25-29	38	38%	40	40%
30-34	23	23%	18	18%
35-39	4	4%	7	7%
> 40	2	2%	0	0%
Parity	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
P ₀	0	0%	0	0%
P ₁	21	21%	20	20%
P ₂	52	52%	48	48%
>P ₃	27	27%	32	32%

TABLE NO.1 : DEMOGRAPHIC DISTRIBUTION (N=200)

In group I 60 % were lived in urban and 40% were rural. In group I- blood loss < 20cc in 64 %. In group II- 40% blood loss, <20cc. In group I retained products 3%

excessive Haemorrhage 1 %. In group II 3% retained products 6% excessive Haemorrhage and 1% had perforation.

Retained Products	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
Incomplete	3	3%	3	3%
Excessive Haemorrhage	1	1%	6	6%
Perforation	0	0%	1	1%
Shock	0	0%	0	0%

Table 2 : Complication

In group I 52% had IUCD and 39% had permanent sterilization. In group II 61% had IUCD and 23% had permanent sterilization. MVA to be effective in 97% and S & E is effective in 98%.

Effectiveness	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
Complete Evacuation	98	98%	99	99%
Incomplete Evacuation	2	2%	1	1%

Table 3: Effectiveness of procedure

Discussion

The table 1 shows that Maximum number (38- 39%)of patients belonged to age group 25-29 years in both group, the major population attending family planning OPD. In this study, 52% patients went for MVA with two living children in both groups. In a study at Belgaum medical college in 1997 by Swany udani and Narayan^[2] 39%patients were with 2 living /children. Approx. 65% of patients were living in urban area and 35% of patients were living in Rural area, In this study, Group I- In 80% of patient, in less than 5 minutes procedure was

completed. Group II- 70% of patient took 10-15 minute. Here p value is <0.05 which is highly significant. Study done by Fang et al and Xu et al shows that there is no significant difference in time needed for both methods.^[3]

Group-I blood loss was less than 20 cc in about 64% cases whereas in group-II, 40% cases were having blood loss < 20cc. So blood loss is significantly less in MVA group. In MVA group, retained products were found in 3% patient in which curettage done. Excessive haemorrhage occurred in 1%. While in Group-II retained products found in 3%, excessive haemorrhage occurred in 6% patient. This Study found that in 52% patients IUCD were applied, 39% patient had permanent sterilization. Group II- IUCD was applied to 61 women after suction and evacuation where as 23 patient i.e., 23% patient had MTP, followed by LTT. So, in both group most of the patient had IUCD inserted after MTP and permanent sterilization. There were similar results was found by Verma Ashok et al Himachal Pradesh^[4] , 45.55% had permanent sterilization after MTP. In 98 patient MTP was completed by MVA alone i.e., efficacy is 98%.and In 99 patient MTP was completed by S & E alone. While in one more study by Hermillin and Moller^[5] 2001 at Dept. of Obst. & Gynaecol, Central hospital, Vasters, Sweden, efficacy was more than 97%.

Conclusion

MVA & EVA, Both have high level of safety and effectiveness, both have low complication rates. MVA is better option for Ist trimester MTP. It is safe, cost effective, blood loss in minimal, very suitable in our population where most of the woman are anaemic. Less time consuming so more number of MTP can be done in a day at hospital and PHC which cater target population area. No major complication seen with MVA so women are not afraid of MTP and thereby reducing population burden. Generated manually, economic, portable makes

MVA a technique best suited for rural setup.. In present study after comparing electrical S & E method with MVA we conclude that MVA is Gold standard for India.

References

1. Renewed reference of MVA – FOGSI FOCUS Making abortion safer 2002
2. MTP in Ist trimester by vacuum aspiration at Medical College, Belgaum by Swamy, Ledani and Narayan- Journal of Obstetrics and gynaecology 51, 2001.
3. Fang AH, Chen QF, Zhou HW, Cheng LN. A clinical study of one off MVA for terminating early pregnancy Chin J Fam plan. 2004:13(4); 292-4.