

MANUAL VACUUM ASPIRATION V/S SUCTION EVACUATION FOR FIRST TRIMESTER MTP

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HOW TO CITE THIS ARTICLE:

Sudha Chaurasia, Bhawna Rametkar. "Manual vacuum aspiration V/s suction evacuation for first trimester MTP". Journal of Evolution of Medical and Dental Sciences 2013; Vol. 2, Issue 40, October 07; Page: 7710-7713.

ABSTRACT OBJECTIVE :- To find out the efficacy of MVA, its comparison with S & E for 1st trimester MTP in terms of time taken and various complications. Safe abortion care the public health human rights rationale, approximately 47,000 pregnancy related deaths are due to complication of unsafe abortion and 5 million were estimated to suffer disability as a result of complication due to unsafe abortion. 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 – Dilation & Curettage, D & E by electric suction machine, MVA and medical abortion by misoprostol and mifepristone. **MATERIAL & METHODS:** 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 97% and by S & E 98%. 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, approximately 47,000 pregnancy related deaths are due to complication of unsafe abortion and 5 million were estimated to suffer disability as a result of complication due to unsafe abortion¹. Almost in all countries the law permits abortion to save the women's life, preserve physical and mental health of women². 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 anesthetic and low levels of postoperative pain and discomfort being an increasing expectation³.

MATERIAL & METHODS: - Prospective randomized study was conducted in Department of Obstetric & Gynaecology a S.Z.H., Bhopal (M.P.) Total 200 cases were randomly selected from family planning 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. Women clients were hospitalized on day care basis before 3-4 hrs. Clients were NBM since 10.00 pm previous day. Informed consent of the client 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

ORIGINAL ARTICLE

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. ampicillin 500 mg, Inj. atropine 0.6mg, Inj. Promethazine 25 mg, and Inj. diclofenac 75 mg IM Step for Procedure Create the Vacuum in the syringe or charge the syringe, women taken on OT table after avoiding. 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 valve (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 clients were shifted to post operative ward and kept under observation for 4-5 hrs for bleeding, pain and complication. Clients 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 9% were < 20 yrs, 24 were % 20-24 yrs, 38 % were 25-29 yrs and in S & E group 10% were < 20 yrs, 25 % were 20-24 yrs, 40 % were 25-29 yrs, 18 % were 30-34 yrs. 52% women went for MTP with 2 living children, 27 % were multiparous in MVA group. 48% women went MTP with 2 living children in S & E group. In group I 65 % were lived in urban and 35% were rural., Time taken in group I 79% < 5 min., 14 % 5-10 min. 6% 10-15min. and 1 % more than 15 min. In group II 6% < 5 min., 74 % 5-10 min., 14 % 10-15 min., 6 % >15 min. for procedure. 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. 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%.

DISCUSSION:- The table 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 Swamy udani and Narayan⁴ 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 79% of patient, in less than 5 minutes procedure was completed. Group II- 74% of patient took 10-15 minute. Here p value is <0.01 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.⁵ Group-I blood loss was less than 20 cc in about 64% cases whereas in group-II, 40% cases were having blood loss <

ORIGINAL ARTICLE

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 Pradesh⁶ 45.55% had permanent sterilization after MTP. In 97 patient MTP was completed by MVA alone i.e., efficacy is 97%.and In 98 patient MTP was completed by S & E alone. While in one more study by Hermillin and Moller ⁷ 2001 at Dept. of Obst. & Gynaecol, Central hospital, Vasters, Sweden, efficacy was more than 97%.

CONCLUSION: - Nothing is Permanent but has to be changed by Better **Comparison between 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. So particularly suitable for very interior areas of villages where there is lack of regular electric supply. In present study after comparing electrical S & E method with MVA we conclude that MVA IS GOLD STANDARD FOR INDIA.

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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)	

ORIGINAL ARTICLE

	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%
Residential Status	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
Urban	65	65%	68	68%
Rural	35	35%	32	32%

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

Time Taken for Evacuation	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
< 5 min	79	79%	6	6%
5 < 10 min	14	14%	74	74%
10 < 15 min	6	6%	14	14%
> 15 min	1	1%	6	6%

TABLE 2 : TIME TAKEN FOR PROCEDURE

Amount	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
< 100 cc	32	32%	15	15%
10 < 20 cc	32	32%	25	25%
20 < 30 cc	27	27%	32	32%
30 < 40 cc	7	7%	8	8%
40 < 50 cc	1	1%	12	12%
> 50 cc	1	1%	8	8%

TABLE 3: BLOOD LOSS IN PROCEDURE

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 4 : COMPLICATION

Contraception	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
OCPS	8	8%	8	8%
Barrier	1	1%	8	3%
IUCD	52	52%	61	61%
Sterilization	39	39%	23	23%

TABLE : 5: METHOD OF CONTRACEPTION

Effectiveness	Group-I (MVA)		Group-II (S & E)	
	No.	%	No.	%
Complete Evacuation	97	97%	98	98%
Incomplete Evacuation	3	3%	2	2%

TABLE 6: EFFECTIVENESS OF PROCEDURE

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Date of Submission: 27/09/2013.
Date of Peer Review: 28/09/2013.
Date of Acceptance: 30/09/2013.
Date of Publishing: 03/10/2013