IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)
e-ISSN: 2279-0853, p-ISSN: 2279-0861.Volume 17, Issue 5 Ver. 4 (May. 2018), PP 20-24
www.iosrjournals.org

Medical Vs Surgical Method of First Trimester Pregnancy Termination

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Abstract: ***Objective:*** *To improve practice of pregnancy termination during first trimester which helps in decreasing maternal morbidity and mortality significantly due to prevention of septic abortion and haemorrhage which are the major complications*

Date of Submission: 23-04-2018 Date of acceptance: 10-05-2018

I. Introduction:

Induced abortion is and probably has been for centuries, one of the most widely used methods of birth control throughout world in spite of strong opposition by many governments, religious bodies and most of medical professionals. Despite some continuing opposition, the majority of world's population now has legal access to abortion as a mean of fertility control.

II. Materials And Methods:

This cross sectional study was carried at a tertiary care hospital between May 2017 andMarch 2018. 150 patients were randomized in three groups based upon the method of termination.
Group A: manual vacuum aspiration
Group B:Dilatation and evacuation
Group C:Medical abortion
Patients of group c were managed on outdoor bases while those from other two groups were admitted in the hospital.
Detailed history of each patient was taken and recorded in a special proforma,depending upon the method used and associated surgery the hospital stay of the patients varied from 48 hours to 8 days.On discharge careful per-vaginal and per-speculum examination performed and signs of pelvic infection looked for.Patientscounselled for follow up visit after 15 days.

III. Results:

A prospective study is conducted of 150 cases of first trimester MTP.100 cases were selected for surgical method ,out of them 50 cases undergo MVA and other 50 cases undergo D&E.50 cases were selected for medical method by mifepristone and misoprostol.

86%from MVA and 72%from D&E group require systemic anaesthesia in the form of spinal or general anaesthesia while in medical group only 6% patients require anaesthesia. So anaesthetic complications are avoided by medical method. Medical method also do not require hospital admission. So medical method is more cost effective then surgical method.

In surgical method major complications like perforation and anaestheticcomplications are more, fever due to infection is also morein surgical group. While in medical group blood loss is more and minor symptoms like vomiting and diarrhoea are more due to side effects of medications used.

IV. Conclusion:

Medical and surgical termination of pregnancy has distinct advantages and disadvantages.

MTP performed by trained personnel in well-equipped centre,after proper evaluation of patient will go in a long way in ensuring safety and efficacy of this procedure.

Changes In Attitude And Legal Status Of Abortion:

During the last 35 years there have been dramatic change in MTP practices throughout the world. In last 35 years abortion laws have been liberalised in many countries to combat high level of illegal abortion with its associated complications and also in women's rights to control her reproductive life.

Thus virtually all countries should have accessible and safe services in place to provide abortion where the law permits

In India Medical termination act started functioning from 1st April 1972and covered liberalised indication for medical termination.

V. Medical ABORTION:

Drugs used: mifepristone and misoprostol

Method:

If duration of pregnancy up to 49 days – give tab. Mifepristone (200mg) on day 1 and tab.misoprostol (400mcg) orally on day 3.

If duration of pregnancy from 49-63 days – give tab.Mifepristone (200mg) on day 1 orally and Tab.misoprostol(800mcg)sublingually on day 3.

Efficacy:

The efficacy of medical abortion method depends on both drug regimen and duration of pregnancy. Efficacy decreases with increasing period of pregnancy.

RISKS:

1. Mifepristone and misoprostol cause nausea,vomiting, diarrhoea chills and rigors.
2. Incomplete abortion may require surgical evacuation.
3. Heavy bleeding may continue up to seven days.

ADVANTAGES

1. Available during early pregnancy.
2. Resembles a natural miscarriage
3. Often considered to be more private
4. Usually avoids surgical evacuation
5. High success rate
6. No anaesthesia

VI. Surgical Method:

Manual Vacuum Aspiration (MVA)

Evacuation of uterine contents using a cannula with a hand held vacuum aspirator.

Efficacy:

MVA success fully ends first trimester pregnancies 99.5% of the times and carries a minor complication rate of 0.01%.

Advantages:

1. Single visit
2. 5-10 minutes to complete the procedure
3. Follow up is not mandatory
4. Effective throughout the first trimester
5. Failure rate of less than 1%

Complications

1. Incomplete evacuation
2. Uterine perforation or cervical injury
3. Haemorrhage and haemorrhagic shock
4. Vagal reaction
5. Pelvic infection

Dilatation And Evacuation:

It refers to dilatation of cervix and surgical evacuation of the contents of uterus. It is method of abortion as well as a therapeutic procedure used after miscarriage to prevent infection by ensuring that uterus is fully evacuated.

Efficacy:

It is very effective method, nearly 99.9% complete evacuation achieved by this method.

Advantages:

1. Single visit

2. 5-10 minutes to complete the procedure
3. Follow up is not mandatory
4. Effective throughout the first trimester
5. Failure rate of less than 1%

Side Effects:

1. Uterine perforation or cervical injury
2. Haemorrhage and haemorrhagic shock
3. Vagal reaction
4. Pelvic infection
5. Anaesthetic complication
6. Affect future fertility

VII. Dilatation And Evacuation:

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Efficacy:

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Advantages:

6. Single visit
7. 5-10 minutes to complete the procedure
8. Follow up is not mandatory
9. Effective throughout the first trimester
10. Failure rate of less than 1%

Side Effects:

7. Uterine perforation or cervical injury
8. Haemorrhage and haemorrhagic shock
9. Vagal reaction
10. Pelvic infection
11. Anaesthetic complication
12. Affect future fertility

VIII. Materials And Methods:

To study "medical vs surgical methods of 1st trimester pregnancy termination" i studied 150 cases in time duration of may 2017 to march 2018

All the 150 patients were randomised in 3 groups a, b, c. Each group has 50 no. Of patients. Groups were based upon the method of termination.

Group A: manual vacuum aspiration

Group b: dilatation and evacuation

Group c: medical abortion

These patients were given tab. Mifepristone (200mg) on day 1 and tab misoprostol n day 3 if duration of pregnancy is up to 49 days. AND tab mifepristone (200mg) on day 1 and tab misoprostol (800mcg) on day 3 if duration of pregnancy is from 49 to 63 days.

Patients were briefed regarding method of termination, its hazards and the method of contraception that could be adopted subsequently. Detailed history was taken regarding duration of pregnancy, obstetric history, menstrual history, past and personnel history of any major illness or operation. All patients undergo general, systemic, and local examination and routine blood investigation with ultrasonography. All details are recorded in special performa.

Depending upon the methods used and associated surgery the hospital stay of the patients varied from 48 hours to 8 days. During their hospital stay patients were carefully watched and routine antibiotics were given.

On discharge clinical examination is done. They are explained about follow up visit after 15 days.in follow upvisit through examination was done and signs of pelvic inflammations looked for

IX. Observation And Discussion*:*

Table No 1			
1. AGE DISTRIBUTION			
AGE	SURGICAL METHOD		MEDICAL METHOD
	MVA	D&E	

< 20	0	(0%)	4	(8%)	7	(14%)
20-29	30	(60%)	33	(66%)	33	(66%)
30-39	17	(34%)	11	(22%)	9	(18%)
> = 40	3	(6%)	2	(4%)	1	(2%)
TOTAL	**50**		**50**		**50**	

Table No 1 Medical method is slightly more common in younger patients because they accept oral medication more rather than to undergo surgery and also younger patients are more concerned about privacy of their methods.

Table No2						
2. PARITY DISTRIBUTION						
PARITY	SURGICAL METHOD				MEDICAL METHOD	
	MVA		D&E			
Nullipara	7	(14%)	10	(20%)	14	(28%)
Primipara	11	(22%)	10	(20%)	8	(16%)
2nd Para	13	(26%)	12	(24%)	8	(16%)
>=3rd Para	19	(38%)	18	(36%)	20	(40%)
TOTAL	50		50		50	

Table No2 In this study 14% and 20% of the patients from mva and d&e group respectively are nullipara while in medical group 28% patients are nullipara which is higher than both surgical group.

Table No3						
3. COMPLICATION						
COMPLICATION	SURGICAL METHOD				MEDICAL METHOD	
	MVA		D&E			
Perforation	1	(2%)	2	(4%)	0	(0%)
Fever	8	(16%)	12	(24%)	5	(10%)
Vomiting	2	(4%)	5	(10%)	12	(24%)
Diarrhea	1	(2%)	2	(4%)	4	(8%)
TOTAL	12		21		21	

Table No3in This study, uterine perforation occurred in 1 patient (2%) in mva group for which laprotomy done and 2 patient (4%) in d&e group out of which 1 patient is managed conservatively and 1 patient require laprotomy while no perforation noted in medical abortion.

Table No4						
4. BLOOD LOSS						
BLOOD LOSS	SURGICAL METHOD				MEDICAL METHOD	
	MVA		**D&E**			
Minimal	3	(6%)	2	(4%)	4	(8%)
Moderate	1	(2%)	2	(4%)	6	(12%)
TOTAL	4	(8%)	4	(8%)	10	(20%)

Table No4

- Mva group-6% experience minimal blood loss which managed conservatively by tab. Misoprostol and 1 patient (2%) experience moderate blood loss required d&e.
- From d&e group 2 patient experience minimal blood loss.
- 2 patient experience moderate blood loss out of which 1 patient require bt and 1 patient managed conservatively.

From medical group 8% pt experience minimal blood loss & 12% patient experience moderate blood loss out of which 2 patient require bt & then managed conservatively.

Table No5						
5. EFFICACY OF METHOD						
	SURGICAL METHOD				MEDICAL METHOD	
	MVA		D&E			
Incomplete Abortion	4	(8%)	3	(6%)	10	(20%)
Complete Abortion	46	(92%)	47	(94%)	40	(80%)
TOTAL	50		50		50	

Mva group-total 4 patient (8%).
D&e group-total 3 patient (6%)
Medical group-10 patient (20%) experience incomplete abortion.

X. Results And Discussion:

A prospective study is conducted of 150 cases of 1st trimester MTP. 100 cases were selected for surgical procedure out of them 50 under go MVA and other 50 cases under go D&E50 cases selected for medical method with mifepristone and misoprostol.

Most of the patients were young (21-29 yrs). Medical method is more common in young patients.

86%from MVA group and 72% from D&E group require systemic anaesthesia in the form of spinal or general anaesthesia while in medical group only 6% require anaesthesia. So anaesthetic complications are avoided by medical method.

All the patients from surgical group require hospitalization. So medical method is more economic then surgical.

In surgical method major complications like perforation and anaesthetic complications are more, fever due to infection is also more common in surgical group while in medical group blood loss is more and minor symptoms like vomiting and diarrhoea are more frequent.

In surgical group total 7% patients had incomplete abortion out of them only 1 % require repeat D&E. While in medical group 20% patients had incomplete abortion out of which 6% require D&E.

Thus surgical method has higher efficacy as compared to medical method especially in later weeks of gestation.

XI. Conclusion:

Medical and surgical methods has distinct advantages and disadvantages. Therefor decision to prefer one procedure over other carries trade-offs.

Medical methods for first trimester abortions have been demonstrated to be both safe and effective. Among surgical method MVA is newer method which has lower complication rate and higher acceptability but needs wider application and availability over traditional dilatation and evacuation.

It is critical to be able to offer safe and quality services closest to community to increase utilisation. There is need to train more skilled provider for offering safe and legal abortion services.

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Dr.Komal A. Modi "Medical Vs Surgical Method of First Trimester Pregnancy Termination." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 5, 2018, pp 20-24