

**INTRAUTERINE SUCTION FOR CONTROL OF ATONIC PPH****ALKA PANDEY^{al} AND NEELM KUMARI^b**^{ab}Department of Obstetric & Gynaecology, P.M.C.H., Patna, Bihar, India**ABSTRACT**

31 women having atonic PPH after caesarean section on OT table were recruited for the study. Plastic suction cannula which was connected to a suction machine was inserted and negative pressure of about 600 mm was created. Bleeding stopped in 21 cases within 9 minutes and blood accumulated in the suction tube ranged from 150-300 ml. This method has a success rate of 88.9%. It is cost effective needs minimal training and is very useful in saving maternal lives from atonic PPH.

KEYWORDS: Suction Cannula, Atonic PPH

PPH accounts for 38% maternal deaths, RGI-SRS (2001-2003). The speed with which death can occur due to PPH presents a major challenge in settings with poor communication and shortage of necessary drugs and equipments.

Majority of cases of PPH are due to uterine atony. Several measures have been adopted to correct this e.g. - Utero tonics, uterine massage, intrauterine balloon tamponade and suction of uterine cavity before proceeding for laparotomy. Suction has been tried in several studies by various authors to control atonic PPH with great success. In this article we have tried to see the effect of suction as a measure to control atonic PPH. Many women die or have severe morbidity due to massive PPH. Atonicity is a commonest cause of PPH. We have conducted this study in labour room PMCH with an aim to see the effect of uterine suction in controlling atonic PPH.

MATERIALS AND METHODS

The study was carried out in the emergency labour room of Patna Medical College & Hospital. 31 women having atonic PPH after caesarean section on OT table were recruited for this study. All uterotonic drugs were given to the woman. Tranexamic acid - 1 gm IV was given slowly. Uterine massage was done. When the woman failed to respond to these measures then we decided to do suction of the uterus.

With all aseptic and antiseptic methods, the woman was placed in lithotomy position and plastic suction cannula was inserted into the uterine cavity. The uterine cannula was connect to a suction machine. A negative pressure of about 600 mm was built up. The cannula was kept in the uterine cavity for a maximum of 15 minutes.

In two women in whom the bleeding failed to stop, obstetric hysterectomy had to be done.

OBSERVATIONS

31 women having atonic PPH after caesarean section on OT table in the labour room PMCH, Patna were selected for this study and shown in table 1, 2, 3 & 4.

Table 1: Age

Age	No. of Women	Percentage
20-25	8	25.80
26-30	16	51.61
31-35	7	22.58
TOTAL	31	

Table 2: Parity

	No. of Women	Percentage
Primi	18	58.06
2 nd Gravida	11	35.48
3 rd Gravida	2	6.45
TOTAL	31	

Table 3: Risk Factors

	No. of Women	Percentage
None	18	58.06
Placenta Previa	4	12.90
Multiple Fetal Pregnancy	3	9.68
Polyhydramnios	2	6.45
Abruptio	1	3.23
Severe PET	3	9.68
TOTAL	31	

Table 4: Time Taken To Stop Bleeding

	No. of Women	Percentage
0 - 3 Minutes	9	29.03
3.1 - 6 Minutes	18	58.06
6.1 - 9 Minutes	2	6.45
Did not respond	2	6.45
TOTAL	31	

The collection in the suction tube ranged from 150 ml to 300 ml.

DISCUSSION

Post partum hemorrhage is the leading cause of maternal mortality accounting for 35% of all maternal deaths. A practice bulletin from the American College of Obstetrics & Gynaecologist places the estimate at 140,000 maternal deaths or 1 woman every four minutes dies due to PPH. PPH is the quickest of maternal killers, can kill even a healthy women within 2 hours if not treated³. Incidence of PPH is reported as 2% - 4% after vaginal delivery and 9% after caesarean section with uterine atony being the cause in 50%.

The rapidity with which some women step into coagulation failure and multi organ dysfunction from hemorrhagic shock is alarming. Negative pressure created inside the uterus with a uterine cannula results in shrinking of the uterus which can assist the natural process of contraction and retraction to stop atony PPH.

In our study 77.41% women were in the age group of 20-30 years and 58.06% were primi gravida. 58.06% women who presented with atony PPH did not have any risk factors.

When uterotonics, tranexamic acid and uterine massage failed to control bleeding, the patients was put in lithotomy position and plastic suction cannula was applied in the uterine cavity and connected to the suction machine through a rubber tubing. The cannula was kept in the uterine cavity and a negative pressure of about 600 mm was created and the cannula was kept in the uterine cavity for 15 minutes.

The amount of blood collected in the suction tube ranged from 150-250 ml. It was observed that 93.54% women responded and the bleeding stop within 9 minutes. Two women did not stop bleeding and as these women were 3rd gravida obstetric hysterectomy was performed. Makhija *et al.*, 2014 had a success rate of 88.9% with suction in stopping atonic PPH.

Meena and Meena, 2020 use SR vacuum suction cannula in 25 women having risk factors for atonic PPH.

60% of the women were between 20-30 years. 24% were primi gravida and 84% responded and the bleeding stopped at more than 4 minutes. They had a success rate of 100%. 36% of the women in their series had less than 100 ml blood collection in the suction bottle. 40% of women had blood collection of 101-200 ml and 20% of women had blood collection of 201-300 ml. These studies are very much similar to our study.

In the study of Hemmanur and Samyukthallla, 2019, 22 women were included in the study. Blood collected in the suction bottle ranged from 50 ml to 250 ml. There was firm contraction and retraction within 3 minutes. In 15 women the suction cannula was applied ones and 6 women it was applied twice. One woman had to be suctioned thrice as the bleeding recurred.

Vasudeva Panicker, 2017 has used this technique in 55 women having atonic PPH. He use special cannula made of steel or plastic 25 cm long, 12 mm diameter and multiple holes. This was inserted in the uterine cavity and a negative pressure of 700 mm was created. Blood collected in the bottle was 50-300 ml.

Hofmeyer *et al.*, 2019 used suction tube uterine tamponade in three cases of profound PPH and maternal decomposition as last resort prior to laparotomy. Bleeding was arrested without reports to surgery.

All these studies have similar techniques and results as our study in controlling atonic PPH.

CONCLUSIONS

We found suction to be a very effective technique to control PPH. It needs minimal training and can be immensely useful in saving maternal lives. It also obviates the need of hysterectomy in most cases.

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