

EFFECT OF ANAESTHESIA ON THE BLOOD LOSS IN FIRST TRIMESTER MEDICAL TERMINATION OF PREGNANCIES†

by

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Induced abortion is a global problem. Klinger (1970) reported that about 30-40 million pregnancies a year are interrupted in the world as a whole, thus, on an average, an induced abortion takes place every second. Liberalisation of abortion law has created a need for efficient and safe procedure to accommodate a growing number of patients requesting termination of pregnancy. Hence a comparative study was undertaken to see the effect of anaesthesia on the blood loss.

Material and Methods

Blood loss was studied in 220 patients undergoing first trimester medical termination of pregnancy by suction evacuation method at Lady Hardinge Medical College and Smt. Sucheta Kripalani Hospital, New Delhi. Blood loss was measured from the contents of the aspiration flask after straining to separate products from the blood.

In 190 patients, suction evacuation was done under paracervical block (1% Xylo-

caine). General anaesthesia (I/V thiopental + Nitrous Oxide) was used in 30 cases. No premedication was given. Suction evacuation was done upto 12 weeks of gestation, with the majority (92.6%) being of less than 10 weeks gestation.

Results

TABLE I
Distribution of Blood Loss

Blood Loss in ml.	Percentage of patients	
	Paracervical Block	General anaesthesia
0-60	81.42	10.0
61-120	14.29	30.0
121-180	1.43	10.0
181-240	1.43	30.0
241-300	1.43	10.0
301 or more	0.0	10.0

Terminations done under general anaesthesia resulted in heavier blood loss than done under paracervical block. The incidence of patients having blood loss upto 60 ml was 81.42% under paracervical block as compared to only 10.0% patients under general anaesthesia.

A blood loss of more than 300 ml was found in 10% patients, and only in the group who received general anaesthesia. No patient under paracervical block had a similar amount of blood loss.

The minimum blood loss under general anaesthesia was 60 ml as compared to 5

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†This is the part of Thesis for M.D. (Obst. & Gynec.), submitted to Delhi University in April 1977.

Accepted for publication on 5-1-1979.

ml under paracervical block while the maximum was 405 ml being 1.4 times the amount (286 ml) lost with paracervical block.

Margolis and Overstreet (1970) recorded a loss of 66 ml (Range 20-350 ml) under general anaesthesia as compared to 25 ml (Range 20-125 ml) under paracer-

TABLE II
Average Blood Loss in Relation to Period of Gestation

Period of gestation in weeks	Blood loss in ml.			
	Paracervical block		General anaesthesia	
	Mean	S.D.	Mean	S.D.
up to 6	12.77	13.6	75.0	23.6
7-8	35.30	16.9	183.3	17.5
9-10	61.1	12.7	225.0	35.0
11-12	204.0	24.5	405.0	10.0

Blood loss was also dependant on period of gestation in both groups. It doubled under general anaesthesia and trebled under paracervical block when period of gestation increased from 4-6 weeks to 7-8 weeks. There was statistically significant difference in the amount of blood loss for every two weeks of gestation ($P < 0.05$).

Blood loss was always more in abortions done under general anaesthesia than paracervical block when compared with same period of gestation. It was 5-6 times more under general anaesthesia in 4-8 weeks gestation and 2-3 times more in 9-12 weeks gestation as compared to paracervical block and this difference was statistically significant ($P < 0.01$).

Discussion

This comparative study showed that blood loss was always more in abortions done under general anaesthesia as compared to paracervical block, what ever the period of gestation.

The average blood loss under general anaesthesia was 170.5 ml (Range 60-405.0 ml) being 4 times more than 39.9 ml (Range 5-286 ml) seen under paracervical block and this difference was statistically significant ($P < 0.01$).

vical block.

Cullen *et al* (1970) observed a loss of 58 ml in nitrous oxide group and 25.6 ml in paracervical block.

In this study, no patient had blood loss more than 300 ml under paracervical block as compared to 10.0% under general anaesthesia. Stewart and Goldstein (1972) also observed that no patient had blood loss more than 500 ml in the group that received local anaesthesia as compared to 4% in nitrous oxide group and 9% in Halothane group.

Brudenell (1972) reported that blood loss was reduced if the patient was anaesthetized by intravenous rather than inhalational agents and the use of paracervical block reduced blood loss further.

No patient in this series, required blood transfusion as was noted by Lauersen and Conrad (1974), while 1.12% patients required blood in the series of Dvorak *et al* (1967).

General anaesthetics affect blood loss during these procedures by their effect on both uterine tone and uterine blood flow (Cullen, 1970).

Vasicka and Kretchmer (1961) stated that epidural, spinal anaesthesia and

general anaesthesia with nitrous oxide does not alter uterine contractions whereas ether, fluothane has marked inhibitory effect on uterine contractions. In first plane, contractions are diminished by 50% and in upper 2nd plane by 90% and in lower second plane no contractions occur. Ether acts centrally and diminishes the release of oxytocics from pituitary or hypothalamus or acts directly on myometrium or its enzyme oxytocinase. Dvorak *et al* (1967) could not confirm that the use of thiopentone sodium during evacuation of uterus increased blood loss by reducing uterine contractility.

Conclusion

Blood loss was 4 times more in abortions done under general anaesthesia as compared to loss seen under paracervical block. Blood loss was proportionate to period of gestation.

Acknowledgement

We thank Dr. S. Chawla, M.S. (Rad), D.M.R., F.A.M.S., Principal & Medical Superintendent of Lady Hardinge Medical College and Smt. Sucheta Kripalani Hospital, New Delhi for giving permission to publish this paper.

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