

EVALUATION OF DIFFERENT TECHNIQUES OF LOCAL ANALGESIA IN CASES OF VACUUM ASPIRATION

by

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Introduction

Ever since the Law of Medical Termination of pregnancy was introduced, vacuum aspiration has been the standard procedure in the first trimester. It is usually done as an out-patient procedure under local analgesia. Paracervical block using 1% lignocaine or xylocaine injection at 3 and 9 o'clock position is usually the procedure of choice. However, it carries with it the drawback like discomfort, allergic reactions, difficulty in dilating the cervix, incomplete evacuation and post-abortual bleeding. To obviate the above, Walden (1973) further modified the procedure by injecting local anaesthetic at 1 c.m. from external os into the musculature of the cervix at 3 and 9 o'clock positions. Pericervical block was first tried and reported by Beric and Kupersannin (1971). Anaesthetic solution was injected at 1, 5, 7 and 11 o'clock positions at the outer part of cervix. In the original pericervical technique, 5 units of pitocin with

antispasmodic was added to lignocaine 1% for better dilatation and quicker and complete evacuation of uterus with minimal side effects. Similar observations were made by Kamat *et al* (1979) using pericervical block.

Material and Methods

One hundred and ninety patients seeking MTP at Cama and Alibless Hospitals, Bombay during the period February 1978 to August 1980 were taken for this study. Patients were divided into 3 groups. Group A were given lignocaine 1%, 15 to 20 mls locally. Group B were treated with lignocaine 1%, pitocin 5 units and epidosin 2 mls (16 mg). Group C, Buscopan 2 ml (40 mgs) with pitocin 5 units added to lignocaine. Premedication with pethidine 75 mg, sequil 10 mg, and atropine 0.6 mg. I.M. was given half an hour before the procedure.

All these patients were again divided into three groups. Group I were cases of paracervical block. 3.5 mls. of local anaesthetic solution was injected at 3, 5, 7 and 9 o'clock position at a depth of $\frac{1}{4}$ ". Group II were treated with modified paracervical block (better termed intra-cervical). In group III—pericervical block at 1, 5, 7 and 11 o'clock positions upto a depth of $1\frac{1}{2}$ ".

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Observations

Age Incidence

Majority of the patients were between 26-30 years. Youngest patient was 17 years old and the oldest 33 years old.

Parity: There were 20 nulliparous patients and Gravida II and III were common.

Easy Dilatation with Different Techniques other two blocks.

tation. In pericervical, the addition of Epidosin and pitocin as well as Buscopan and pitocin did reduce the blood loss at all weeks of gestation. However, such a decrease was not observed with paracervical and modified paracervical.

Discussion

Strauz and Schulman (1971) described the quality of paracervical block anaesthesia and found that it was excellent in

TABLE I
Type of Block and Results

Type of Block	Group A 70 cases	Group B 60 cases	Group C 60 cases
I	13 (43.33%)	16 (53.3%)	18 (72.0%)
	—	—	—
	30	25	25
II	6 (60.0%)	7 (70.0%)	8 (80.0%)
	—	—	—
	10	10	10
III	22 (73.6%)	19 (76.0%)	20 (80.0%)
	—	—	—
	30	25	25

The pericervical block i.e. Group III had the overall results much better than other two blocks.

Duration of Procedure

The duration of procedure was counted from the time the curettage was started after waiting for 2-3 minutes following the infiltration of local anaesthesia. It was observed that the time was increased with increase in weeks of the gestation. The minimum time taken to complete the procedure was 3 minutes and maximum was 20 minutes. In all 3 groups, time taken with pericervical is less at each week of gestation in each group.

Blood Loss

It was observed that blood loss was directly proportional to the weeks of ges-

201 out of 500 outpatients (75%); good in 62 (23.1%) and poor in 4 (1.5%) but no such category was emphasised by others. In our study resistance during the dilatation of the cervix was noted and the cases were classified as easy or difficult (Table I). The pericervical block technique is better than the other two blocks and with Group C it gave the best results. As above mentioned, Strauz *et al* (1971) described the quality of analgesia instead of degree of dilatation. They concluded that pain was generally associated with dilatation rather than suction and curettage. Multigravidas experienced less pain than primigravidas.

Ghosh *et al* (1973) evaluated 120 cases of termination of pregnancies under paracervical block at 3, 6, 9, 12 o'clock positions with success rate of 85%. Kamat

TABLE I
Complications Due to Local Anaesthesia

	A			B			C		
	I	II	III	I	II	III	I	II	III
Tachycardia	1	-	-	1	1	2	-	-	3
Fall in B.P.	-	-	-	-	-	-	-	-	-
Vomiting	2	1	-	1	1	-	1	1	1
Rigors	1	-	-	1	-	-	-	-	-
Convulsion	1	-	-	-	-	-	-	-	-

The complications were more with paracervical block in Group A.

et al (1979) reported resistance and free dilatation was possible in 63.8% cases with pericervical, while it was 36.0% with paracervical technique. Thus it is obvious that the use of either epidosisin or Buscopan in addition to lignocaine and pitocin in Group C was very much effective in dilatating the cervix by virtue of its smooth muscle relaxant action.

In this study it was noticed that the time increased with increase in the weeks of gestation. Addition of Buscopan and Epidosisin did not modify the duration of procedure at 10 and 12 weeks in all three groups. Thus from the above observations it is proved that pericervical block technique is superior and addition of pitocin and Buscopan helped in easy and quick evacuation of the products rather than plain lignocaine used as analgesic solution alone.

In the present series the average blood

loss was 45, 46.60 and 53.33 ml. with pericervical, modified paracervical and paracervical technique. At 6 weeks of gestation, it was 65.33, 74.66 and 82.66 at 8 weeks and at 10 weeks of gestation. It was 91.33, 96.00 and 106.33 ml. of blood loss with pericervical, modified paracervical and paracervical technique respectively. At 12 weeks it was 150.30 ml., 149.33 and 180.66 ml. with pericervical, modified paracervical and paracervical technique respectively. Thus blood loss was less in pericervical group at 6, 8 and 10 weeks of gestation.

Only in 19 cases (10%) complications were noticed (Table II). The addition of either pitocin or antispasmodic like Buscopan or Epidosisin increased the heart rate. The operative complications (Table III) like uterine perforation in 1 case and 4 cases cervical lacerations were observed in present series. These complications can

TABLE II
Operative Complications

Type	A			B			C		
	I	II	III	I	II	III	I	II	III
Uterine Perforation	-	-	1	-	-	-	-	-	-
Cervical Laceration	1	-	1	1	-	-	-	-	1

TABLE III
Post-Abortal Bleeding

Type	A			B			C		
	I	II	III	I	II	III	I	II	III
Post-abortion bleeding									
Nil	-	-	-	-	1	2	-	1	2
Minimal	7	4	13	5	3	4	8	3	9
Mild	14	4	10	20	4	9	11	6	11
Moderate	9	6	2	7	2	3	4	-	5
Profuse	1	-	-	-	-	-	-	-	-

There was only 1 uterine perforation.

The addition of pitocin with Epidosin and Buscopan (Groups B and C) did minimise the post-abortion bleeding.

be avoided with experience and skillful technique.

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