PERICERVICAL BLOCK WITH VACUUM ASPIRATION

by

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Introduction

Since the legalization of abortion, vacuum aspiration has been the standard procedure for termination of pregnancy on an outpatient basis. This is usually done under the paracervical block. Beric and Kupresanin (1971) reported the use of pericervical block in 97.6% out of 22,900 legal abortions performed in outpatient clmics. They used in the pericervical block—a mixture of analgesic, antispasmodic and oxytocic. Advantages claimed by this technique are simplicity, rapidity, small blood loss, safety and low incidence of immediate and late complications.

The purpose of this trial was to study whether this procedure has any advantage over the standard paracervical block.

Material and Methods

Two hundred and forty-one cases, who underwent termination of pregnacy at the outpatient department of Sassoon General Hospitals, Poona during the period January to June 1976 were taken up for this study.

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Accepted for publication on 16-6-1978.

Paracervical block using lignocaine (1%)—10 to 20 ml was used in 125 cases. In 166 cases pericervical block was done using a mixture of Lignocaine (1%) 20 ml. Epidosin one ampoule (8 mg.) Pitocin one ampoule (5 I.U.). The mixture was injected in the pericervical tissues at a depth of 3-4 cm. from the vaginal fornices at 1, 5, 7 and 11 O'clock. The procedure begins 2-3 minutes after the injection which is sufficient time for the mixture to take effect. The cervical dilatation and evacuation of the uterus (M.T.P.) was carried out by either hand operated machine or electrically operated Berkalay Machine.

Observations

Age: In this study youngest patient was 14 years old and oldest was 45 years old. Majority of the patients were between 16-30 years.

Parity: Majority of the patients belonged to para I and II. Eighteen (7.3%) patients were nulliparous.

With pericervical technique difficulty in dilatation of the cervix occurred in nulliparа and para I in only 22% as compared to 40% with classical paracervical technique.

Dilatation: Resistence-free dilatation was possible in 63.8% cases with pericervical, while it was 36.0% with paracervical technique.

Pain: Eighty-five (73.3%) patients did not feel pain during dilatation with pericervical block as compared to 70 (56%) with paracervical block.

Similarly at the time of curettage, 98 (84.3%) patients with pericervical block did not complain of pain while only 40 (32%) without pain were from paracervical group.

Use of Supportive Treatment: Only 6 (5.1%) patients with pericervical anaesthesia required drugs to relieve pain after the procedure, while 35 (28%) with paracervical required analgesics and antispasmodics to relieve pain.

Blood Loss: Average blood loss with pericervical block was only 107 ml. as compared to 150 ml. with paracervical block. Loss of blood was minimal with pericervical block with respect of weeks of gestation (Table I)

At the time of check-curettage, suction evacuation was found to be practically complete in almost all cases with pericervical block except 2 (1.2%) cases, while the paracervical it was found to be incomplete in 6 (4.8%) cases.

Duration of Operation: Average time to complete the pericervical was only 3.3 minutes as compared to 6.6 minutes with paracervical. With each week of pregnancy time taken to complete the procedure with paracervical was double the time taken with pericervical anaesthesia (Table II).

Immediate Side Effects: While the side effects were very few with both the procedures, tachycardia (by 15 beats/min.) was observed in 4 (3.4%) with pericervical while in 2 (1.6%) with paracervical block (Table III).

Postabortal Bleeding: Bleeding lasting for more than 4 to 6 days occurred in 85 (68.0%) in paracervical as compared to 59 (50.8%) with pericervical anaesthesia.

Also with pericervical most patients had only mild bleeding as compared to paracervical where moderate bleeding was observed as a prominent feature.

TABLE 1
Period of Gestation and Blood Loss

Blood loss with technique	Weeks of gestation			Average blood loss
	8	10	12	
Paracervical (ml.)	100	150	200	150
Pericervical (ml.)	70	100	150	106.6

TABLE II
Period of Gestation and Duration of Operation

Duration and technique	Weeks of gestation			Average duration
	8	10	12	
Paracervical (Min.)	4	6	10	6.6
Pericervical (Min.)	2	3	5	3.3

TABLE III
Immediate Side Effects

Side Effects	Paracervical	Pericervical
Tachycardia (15 beats/min.)	2 (1.6%)	4 (3.4%)
Fall in B.P. (10 mm Hg.)	1 (0.8%)	1 (0.9%)
Nausea/vomiting	4 (3.2%)	4 (3.4%)
Rigor	1 (0.8%)	— —
Total	8 (6.4%)	9 (7.7%)

TABLE IV
Postabortal Bleeding: Amount

Amount	No. of Patients	
	Paracervical	Pericervidal
Nil	1	2
Mild	84	92
Moderate	40	22
Profuse	—	—

Discussion

Paracervical block has been used in gynaecology for many years. All investigators described paracervical block as a simple and safe method of relieving pain. It is sometimes known as uterosacral block. The technique places the anaesthetic agent along the base of the broad ligament and the lateral wall of the cervix and isthmus of the uterus, thus blocking the afferent sympathetic pathway from the uterus.

The anaesthetic is often injected in a classical method at 3 and 9 O'clock position. Though the procedure provides rapid, reliable anaesthesia which may be adequate for most patients it has a drawback of intravasation into the vessel. Also it takes some time to act. In many occasions it does not completely relieve the pain either during dilatation of the cervix or during suction evacuation. Other complications attributed to this technique includes haematoma of the broad ligament, sacral neuritis and parametritis.

Classically, in pericervical block the solution used in a mixture of anaesthetic, antispasmodic and oxytocic agents. Beric and Kupresanin (1971) used a mixture of procaine, papaverine, oxytocin and atropine. Of late they substituted Buscopan for papaverine and atropine.

In the present study a mixture of lignocaine (1%) Epidosin and Pitocin was used. Epidosine is a synthetic, spasmolytic which possessed the therapeutically valuable properties of atropine and papaverine without their side effects. The drug has property to relive the spasm of smooth muscle fibres of cervix, especially at the internal os and hence was used to relieve spasmodic pain in the dysmenorrhoea and also being used to accelerate labour in the late dilatation of the cervix. Along with the local anaesthetic agent it relieves the spasm of the cervix and helps in easy dilatation during the procedure.

Pitocin is known to make the uterus contract and relax the cx. This helps in controlling the bleeding and easy dilatation of the cervix.

In the pericervical technique the anaesthetic mixture is injected at 1, 5, 7 and 11 O'clock position in the pericervical tissues to a depth of 3-4 cms. The solution injected in this way takes less time

to act and one has to wait only for 2-3 minutes to start the procedure. There is less chance of encountering into the blood vessel and also formation of local haematoma.

Strausz and S'chulman (1971) advocated that the injection should be given in the cervico-vaginal region at 4, 5, 7 and 8 O'clock position. Beric and Kupresanin (1971) advocated the injection at 1, 5, 7 and 11 O'clock position as in the present series. Walden (1973) observed that the paracervical block in an uneffaced cervix as a procedure for elective abortion produces unreliable anaesthesia. He advocated that the insertion of the centre of the external os at 3 and 9 O'clock and parallel to cervical canal just beneath mucosa. Walden's technique is described as modified paracervical block is in a way a pericervical block.

Epidosin and pitocin are added to the anaesthetic agent to relax the cervical canal. This mixture causes vasoconstriction, contraction of the myometrium and relaxation of the cervix with minimal bleeding. With this technique it was observed that the cervical canal in the multipara relaxes sufficiently so that one can introduce 7-8 No. Hegar's dilator very easily.

Beric and Kupresanin (1971) series, average duration of the procedure was 1.5, 2.5 and 5 minutes for 8, 10 and 12 weeks of gestation while the corresponding time with paracervical was 19, 3 and 5-6 minutes. Similar difference in duration was observed in our series. They also reported less bleeding with pericervical block to the extent of 30, 35 and 40 ml less amount of bleeding for 8, 10 and 12 weeks of gestation with pericervical block. In the present study the difference in the blood loss between the two procedures was 30, 50 and 50 ml for 8, 10 and 12 weeks gestation. Frequency of retained products with vacuum aspiration under pericervical block in the present series was 1.2% which compairs with 1.3% in Beric Kuprasanin (1971) series. With paracervical, frequency of retained products was 4.8%.

Present study suggests that the pericervical block with mixture of lignocaine, Epidosin, pitocin makes the dilatation of cervix easy, makes the procedure painless with minimal amount of bleeding and other side effects. At the same time operative procedure is more complete and safe as compared with conventional paracervical block.

Acknowledgement

Our thanks to Dean, B. J. Medical College and Sassoon General Hospitals, Poona for permitting us to undertake this clinical trial and publish our work.

Our grateful thanks to Orient Pharma Private Ltd., Madras for co-operation and supply of drugs for this clinical study. We are also thankful to Mr. Malgaonkar, Orient Pharma Pvt. Ltd. for his co-operation in this study.

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