UTERINE PERFORATION IN CONNECTION WITH VACUUM ASPIRATION AND DILATATION AND EVACUATION FOR LEGAL ABORTIONS

by

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Introduction

With the large numbers of first and mid-trimester abortions, the problem of instrumental perforation of the pregnant uterus has become common. Difficulty with cervical dilatation and the need for more extensive dilatation leads to formation of false channels of large diameter through areas of great vascularity of the softened uterine wall. The use of large calibre instruments such as ovum forceps, curettes and suction cannulas are capable of great disruption of tissues and make the possibility of bleeding and bowel injury more likely.

Material and Methods

The study comprises of 33 cases of perforation during MTP's undertaken in the department of Obstetrics and Gynaecology, State Zenana Hospital, Jaipur during the period 1976 to 1981. The total number of MTP's performed during this time were 5004 Vacuum Aspiration (4404 first trimester and 600 midtrimester). This study does not include the MTP cases by prostaglandins, hypertonic saline and ethacridine. After a thorough history taking and examination patients were prepared either for MTP by vacuum aspiration/dilatation and evacuation or MTP with sterilisation.

Observations

During the 6 years of study, 33 uterine perforations occurred in 5004 MTP cases and the incidence comes to 0.65%.

The age of 33 patients ranged from 24 to 40 years, the average age being 28 years. The parity ranged from 0 to 4. Out of 33 patients, 20 were in first trimester and 13 were in second trimester.

The length of gynaecologist employment (skill) was also taken into consideration (Table I). The method of dilatation was noted in this study (Table II). The instruments responsible for uterine perforation in this study are shown in Table III. In 5 cases of unknown perforation, it was not possible to attribute the cause of perforation to any instrument.

The site of perforation and the uterine attitude in 28 cases as identified at laparotomy is shown in Table IV and 5 cases were kept under observation. One inte-

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TABLE I
Length of Gynaecologist Employment in 33 Cases of Study

Years of Employment	No. of Patients
1 year	16
2 years	11
3-5 years	4
over 5 years	2
Total	33

TABLE II

Method of Dilatation	Number
Rapid dilatation	23
Slow dilatation	
Laminaria Tent	6
Isap-Tent	4

TABLE III
Perforating Instrument Used

Perforating Instrument	No. of Patients
Metal suction cannula	10
Sharp curette	7
Uterine sound	5
Dilator	4
Ovum forceps	2
Unknown	5

resting perforation in a 16 weeks gestation needs mention, in whom the posterior wall of corpus had given way and the small featal head had managed to escape from the uterine cavity into the peritoneal cavity.

The management of the 33 cases is given in Table V. Five patients were kept under observation and recovered without any complication. In 25 patients the rent was repaired either as such or with tubal ligation/partial omentectomy/evacuation of broad ligament haematoma. The 3 patients who underwent hysterectomy all required blood transfusion. In 2 patients, subtotal hysterectomy was performed (low general condition) as both had big broad ligament haematomas with anterior wall ruptures. In 1 patient total hysterectomy was performed due to an anterior isthmic rupture with a broad ligament haematoma. The 5 patients under observation were discharged on the 5th day and all the others were discharged on the 10th post-operative day.

Discussion

A study of 33 uterine perforation from among 5004 cases of vacuum Aspiration/

TABLE IV
Site of Uterine Perforation and Uterine Attitude

Site of Perforation		Uterine Attitude	
Anterior Wall (16)	isthmus (8)	Anteposed	00 cases
	corpus (8)	Retroposed	12
		Unknown	4
Posterior Wall (5)		Anteposed	3
		Retroposed	1
		Unknown	1
Broad Ligament (5)	Right side (1)	Anteposed	3
	Left side (4)	Retroposed	2
Cornual Area (2)	Right side (1)	Anteposed	1
	Left side (1)	Retroposed	1

TABLE V
Management of 33 Cases of Perforation

Management	No. of cases
Under Observation	5
Rent repair only	12
Rent repair and tubal ligation	8
Rent repair and partial omentectomy	2
Rent repair and evacuation of broad ligament haematoma	3
Hysterectomy Subtotal	2
Total	1
Total	33

Dilatation and Evacuation is presented. The incidence of perforation in our series is 0.65%. The study refers only to uterii where known perforations were there, but, perforation may have remained undiagnosed. Fortunately, in our series of perforations, there was no pelvic or abdominal damage.

It is evident from the observations that the cause of accidental perforations during V.A./D. & E. can be due to inexperience of gynaecologist. Lesser the experience, more are the chances of perforation. With years of added experience, this mishap has definitely been less common. Uterine attitude is the other factor, because retroposed uterus is more difficult to define with respect to its size and configuration. In our series, 60% of cases had retroverted uterii and Nathanson (1972) has also reported the same in 58% of cases in his series. Forceful and rapid dilatation of cervix may be the third cause of accidental perforation. Routine use of slow dilatation of cervix by Laminaria/Isapgol tents definitely eliminates extensive cervical tears, cervical incompetence and uterine perforation.

The metal suction cannula has been most notorius in causing perforations in the present series (10 cases). Mitra *et al* (1980) also noted maximum number of perforations with the plastic/polythene cannula. Gupta and Khatri (1981) reported maximum number of perforations with the sharp curette, though in Moberg's (1976) series the uterine sound, dilator and suction cannula all equally caused perforations.

The commonest site of perforation in the present series was the anterior wall of corpus followed by posterior wall. Gupta *et al* (1981) report cornual ruptures as the commonest.

Lanerson and Birnaum (1973) routinely performed laparoscopy to decide the further management of perforations and found it very useful in deciding whether a laparatomy is needed or not. Though we have not routinely performed laparascopy in our series of patients, yet, in our 4 patients the perforations were observed while doing laparascopic sterilisation.

Summary

Thirty-three cases of known uterine perforations were analysed. We are of the opinion that perforation during Vacuum Aspiration/Dilatation and Evacuation could be reduced by:

1. Skilled gynaecologist.
2. Performing M.T.P. under anaesthesia.
3. Avoiding the routine use of uterine sound.
4. Asking the patient to void prior to entering the procedure room as patients may have to wait for considerable length of time; consequently by the time the M.T.P. is performed the partially full urinary bladder may resemble the soft anterior corpus to the inexperienced operator.
5. By ascertaining the uterine size and position prior to M.T.P.
6. Dilating the cervix by slow dilata-

tion (Laminaria/Isapgol tents). If rapid dilatation is undertaken very slow, gradual screw-like movements should be performed. (Taking into consideration the direction of the cervical canal).

7. Discontinuing the instrumentation at the slightest suspicion of perforation.

8. If there has been extensive instrumentation, and/or shock and/or removal of fat/omentum a Laparatomy should be decided.

9. Whenever there is a doubt of perforation, immediate Laparascopy is advisable.

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