

## VACUUM ASPIRATION OF THE UTERUS

by

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The need for evacuation of the gravid uterus arises in cases of incomplete abortion, inevitable abortion, hydatidiform mole and therapeutic termination of pregnancy. The standard technique of dilatation of the cervix followed by piecemeal removal of the uterine contents by blunt curettage is universally used. In the past few years, vacuum aspiration of the uterus and evacuation of uterine contents by negative pressure has gained recognition and is widely practised.

In the present analysis, to evaluate the procedure, 125 personally performed cases of aspiration evacuation of the uterus were studied during my tenure as a Registrar in the National Health Service of Great Britain from April 1968, when the Abortion Act (1967) came into effect, till October 1970.

### Equipment

An electric suction pump capable of exerting a negative pressure of 760 mm of mercury was used. To this was attached a rubber tubing leading to a bottle wherein a vacuum was created. From the latter, thick wide bore tubing of adequate length led to hollow metal curettes of the Bierer pattern, with varying outer diameters of 8, 10, 12 and 14 mm. Occasionally, hollow plastic Kerslake

curettes and even a polyethylene cuffed endotracheal tubes have been used.

### Technique

After standard premedication and general anaesthesia, the patient is brought to the operation theatre. After vulval preparation and vaginal toilet, the bladder is emptied and the patient examined to determine the size, position, and mobility of the uterus. Intravenous injection of 0.5 mg. of Syntometrine is now given.

The anterior lip of the cervix is now held with a volsellum forceps, and the cervix gradually dilated until a dilator one size larger than the estimated duration of gestation has been reached.

- 8 mm for 6-7 weeks' pregnancy
- 10 mm for 8-9 weeks' pregnancy
- 12 mm for 10-11 weeks' pregnancy
- 14 mm for over 12 weeks' pregnancy

The metal suction curette of the required size is introduced and suitable negative pressure gradually obtained. The uterine wall is felt to come in contact with the curette and by experience one learns to judge if the uterus is completely evacuated. Occasionally, placental tissue may block the opening of the curette and this tissue needs removal with a sponge holding forceps. The patient is discharged home the following day if there are no postoperative problems, and is given an appointment to attend a family planning clinic un-

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less her husband has decided to have a vasectomy.

#### Present series

The indications for vacuum aspiration of the uterus are given in Table 1.

TABLE I  
Indications for Vacuum Aspirations

Indications	No. of cases
Therapeutic termination	90
Incomplete abortion	34
Vesicular mole	1

The majority of the 90 cases having therapeutic termination were for socio-psychiatric reasons. The other indications were obstetric and medical problems and "at risk" foetus.

TABLE II  
Marital Status of Patients

Status	No. of cases
Single	48
Married	38
Widowed or divorced	4

The majority of single patients having termination of pregnancy were below 20 years of age. Two patients were having their second termination of pregnancy.

TABLE III  
Blood Loss at Operation

Duration of pregnancy in weeks	Blood loss in mls.				
	100	100-200	200-300	300-400	400-500
4-6	3	—	—	—	—
6-8	29	20	2	1	—
8-10	10	12	1	3	—
10-12	4	2	1	1	—
12-14	—	—	—	—	1

TABLE IV  
Duration of Hospitalisation

Duration in hours	No. of patients
24	67
48	13
72	8
72+	2

TABLE V  
Postoperative Complications ✓

Complications	No. of cases
Uterine perforation	1
Postoperative sepsis	2
Repeat curettage	3
Intermittent vaginal bleeding	8

#### Conclusions

Evacuation of the uterus by vacuum aspiration has a definite advantage over standard dilatation and curettage. The procedure is quick, less cervical dilatation is required and hence less cervical trauma results, and again blood loss is moderate.

However, it may not always be an easy procedure, and I am sure many gynaecologists will agree with this view. The one case of uterine perforation went unrecognised until omentum was seen in the end of the curette. A laparotomy was performed, uterine contents were removed by abdominal hysterotomy and

the rent on the posterior wall of the uterus sutured. Blood transfusion was necessary in one case of 12-14 week's gestation.

A few technical problems may arise. Placental tissue may block the end of the curette, and occasionally there may be leakage around the connections of the rubber tubings after constant use. Nevertheless, the procedure is quick, free from any serious complications and with experience one could use it as a standard procedure for evacuation of the uterus upto 12 weeks of pregnancy.

*Acknowledgement*

I wish to thank the consultants both

at the Royal Gwent Hospital, Newport (Mon.) and at the Queen Mary's Hospital, Sidcup, Kent, for their guidance and training in the above technique.

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