MENSTRUAL REGULATION AND CONTRACEPTION

by

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Introduction

Since its introduction in the early 1970's, menstrual regulation (MR) has received international attention for fertility control, and has been acclaimed for its safety, efficacy, economy and availability in India (Lilaram *et al*, 1977) and in developing countries (Pachauri and Fortney, 1975). MR has been found to be highly acceptable to urban, slum and rural women in our country.

MR refers to the induction of uterine bleeding delayed upto 45 days from the last menstrual period (Brenner *et al*, 1975). Conventional pregnancy tests during this period are not very reliable. Women seeking this procedure may or may not be pregnant. This uncertainty is considered to be an advantage to avoid the intense emotional connotations that in many settings are associated with the word "abortion" (Goldsmith and Margolis, 1974; Lucille and Murphy, 1974). However, from a medical and psychological perspective, although MR relieves anxiety and is also of diagnostic value, it basically represents very early abortion.

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Accepted for publication on 1-6-1979.

Throughout the world many women rely on post-conceptional fertility control methods. This will continue to be the case for the foreseeable future. Not only does MR safely and effectively solve the immediate problem of a suspected unwanted pregnancy, but offers an opportunity to suggest to a women that she adopts an effective preconceptional contraceptive method.

Early 'treatment', the prime advantage of MR, is at the same time its disadvantage because the probability of performing an unnecessary procedure is quite high (Fortney *et al*, 1977). Until an early pregnancy test is developed that is sensitive, accurate and inexpensive, this dilemma will remain. In attempts to reduce the number of unnescessary procedures, recent investigators have extended the original limit of amenorrhoea to 50 days in selecting patients (Irani *et al*, 1975; Wong and Schulman, 1975). Stim (1974) stated that aspirations performed after a negative pregnancy test are not advisable because of the high rate of non-pregnancy. The risk involved in unnecessary procedures is emphasized in the complication rates reported by Brenner *et al* (1975) as 1.1% for non-pregnant women and 2.5% for those who turn out to have been pregnant. The number of procedures required, the cost and possible risks are all reduced if MR is used

only as a backup to contraception (Tietze, 1970).

Material and Method

A total of 500 normal healthy women with regular menstrual cycles were selected from the MTP clinic at the All India Institute of Medical Sciences Hospital. All women were within 45 days of their last menstrual period. There was a history of at least one episode of unprotected coitus. As with any surgical procedure, certain standards of care are essential. Careful menstrual histories were taken and a meticulous examination, general and pelvic, was considered mandatory. Pregnostisec urine pregnancy test was done prior to the procedure in all women. The procedure was performed with only 'verbal' anaesthesia, the patient being fully informed about the procedure and of probable discomfort. No oxytocics, anaesthetics or analgesic premedication was used. The apparatus used is shown in Fig. 1. Cannulae of 4 mm and/or 5 mm diameter were used. No planned dilatation of the cervix was done other than with the cannula. The clot collection trap was connected to the Berkeley electric pump operated at 0.7 to 0.9 atmospheres pressure. No subsequent check curettage was performed. In 100 women, IUCD was inserted after the procedure. The aspirate was measured and examined histologically. All patients were observed for 1 hour following the procedure. At 4 weeks follow-up, a urine pregnancy test and pelvic examination were done.

Observations

A total of 500 women underwent MR. The age groups ranged between 15 to 45 years and parity 0 to 5. Distribution of patients in relation to period of gestation and volume of aspirate is shown in Table I. Pregnancy test was done prior to the procedure and histopathological examination of the aspirate was also done. The histopathological findings are shown in Table II. Pregnancy was confirmed histologically in 80.8% of cases, and by both methods in 68.4% (Table III).

TABLE I
Distribution of Patients in Relation to Period of Gestation and Volume of Aspirate

Gestation period (Days)	No. of patients		
	Vol. of aspirate		
	0-10	11-20	>20 ml
30-35	14	14	4
36-40	95	135	33
41-45	81	105	19

Duration of the MR procedure was 2-3 minutes. During the procedure, abdominal discomfort was noted by a majority

TABLE II
Endometrial Histology

		No.	%
1. Positive	— Gestational Products	354	70.8
2. Probably Positive	— Decidual reaction with no chorionic villi	50	10.0
3. Negative	— Secretory Endometrium	72	17.2
	Non-Secretory Endometrium	11	
	Endometrial Hyperplasia	2	
	Arias—Stella Reaction		
4. Inadequate for opinion		10	2.0
	Total	500	

TABLE III
Correlation of Endometrial Histology and Pregnancy Test

	Endometrial Histology		
	%+	%—	%±
%+	68.4	8.4	8.8
%—	2.4	10.8	1.2

of nulliparous women with the passage of the cannula through the internal cervical os. A suspected uterine perforation occurred in 1 patient who was treated conservatively. No other immediate complications in the form of shock, haemorrhage or excessive blood loss requiring blood transfusion occurred as has been reported earlier (Agarwal *et al*).

A repeat procedure due to the initial procedure being incomplete or vaginal bleeding persisting for 14 days or more was done in 2.75%. Evaluation at 4 weeks showed continuation of pregnancy in 1% cases. For these, repeat vacuum aspiration was done. A total of 11.8% women were symptomatic, the symptom of backache was statistically significantly higher in women where IUCD insertion was done after MR ($P < .01$) (Table IV). Acceptance of contraception before and after MR is shown in Fig. 2.

TABLE IV
Complications

Symptomatology/ Complication	Non-IUCD (400)		IUCD 100	
	No.	%	No.	%
Pain, abdomen	10	2.5	5	5
Cramps, lower abdomen	3	0.75	2	2
Pain, legs	4	1.0	3	3
Backache	1	0.25*	4	4*
Pelvic inflammatory disease	10	2.5	—	—
Repeat evacuation	11	2.75	—	—
Continuation of pregnancy	4	1.0	—	—
Secondary amenorrhoea	1	0.25	—	—
Suspected uterine perforation	1	0.25	—	—

*$P<0.01$

Discussion

MR has gained international acceptance as an appropriate treatment of amenorrhoea, especially when unwanted pregnancy is the suspected cause. Perhaps the most cogent argument for use of MR is its safety and simplicity. There is disagreement about whether a positive pregnancy test is necessary before MR procedure is performed (Fortney, *et al* 1977). For many women, not knowing whether amenorrhoea is a result of conception may be of great psychological value. A number of investigators (Goldsmith and Margolis, 1971; Wong and Schulman 1975) have recommended a positive pregnancy test be a requirement before performing an MR. If the pregnancy test is negative and immediate inspection of the aspirate does not reveal placental tissue, the patient must be warned that she was not pregnant. A histopathological confirmation may then be awaited. A very early pregnancy may occasionally be missed and another aspiration later may then be necessary. Rarely, there is a possibility of an extra-uterine pregnancy. A careful follow-up of these women is necessary until the situation is clarified.

The incidence of pregnancy in the present series by histological diagnosis is 80.8%. A total of 19.2% patients were found not pregnant compared to 22.5% reported by Bhatt and Basu (1978). The risk involved in an unnecessary procedure is emphasized in complication rates (Brenner *et al*, 1975). To further reduce

the proportion of non-pregnant women undergoing MR, a better method of patient selection needs to developed.

Continuation of pregnancy occurred in 1%. Suspected uterine perforation occurred in 1 patient. Another suspected uterine perforation has been reported by Mullick and Dawn (1974) while Goldsmith *et al* (1973) had one uterine perforation. In this series, minor symptomatology was noted in 11.8%, backache being statistically significantly more when IUCD was inserted after MR ($P < .01$). Prior to MR only 26% used contraception while after MR 82.3% accepted contraceptives. In addition, 41.9% accepted highly effective methods. A 95.0% contraceptive acceptance after MR has been reported by Jhaveri *et al* (1978) and Bhatta and Basu (1978).

Summary and Conclusion

This study was undertaken on 500 normal healthy women undergoing M.R. All women were within 45 days of their last menstrual period. Confirmation of pregnancy was done by histopathological examination of aspirate and pregnancy test. Pregnancy test was repeated 4 weeks after the procedure. Pregnancy was confirmed by one or both methods in 80.8%. Continuation of pregnancy occurred in 1.0%. Acceptability of contraceptive methods after MR was 82.3%. Of the 500 women undergoing MR, 100 accepted IUCD. In these, post-MR symptoms were significantly higher than in those without IUCD. It is concluded that MR is a minor surgical outpatient procedure which is reasonably safe and forms a good point to propagate effective contraception.

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See Figs. on Art Paper II