

TREATMENT OF TUBAL OCCLUSION BY HYDROTUBATION

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TREATMENT OF tubal occlusion by hydro-tubation is a simple procedure that is gaining wider acceptance in infertility clinics. Preliminary report by the author, of the above technique at the 9th Malaysia Singapore Congress of Academy of Medicine in September 1974 in Kuala Lumpur (Thambu, 1974; Thambu, 1975) had shown that a study of 50 cases a pregnancy rate of 22 per cent was achieved. This prospective study is a continuation of that study.

METHOD AND MATERIALS

The above study was carried out at the Department of Obstetrics and Gynaecology General Hospital, Malacca from August, 1973 to May 1976. The patients for the study were selected from the infertility clinics where the patients had been previously investigated for the following.

1. Examination under anaesthesia for genital tract abnormality.
2. Uterine size and uterine sound measurement for length of uterine cavity.
3. Diagnostic curettage for histology regarding ovulation.
4. Tubal insufflation for tubal patency.
5. Husbands semen analysis.

Hydrotubation is an outpatient office procedure with no patient preparation. No pre or post procedure sedation is used. The patient is placed in the dorsal position and after cleaning the vulva with Hibitane Solution, a cusco bivalve speculum is

introduced and the cervix visualised. Initially a volsellum was used to hold the cervix, but after the first 50 cases, no volsellum was used and the Leech Wilkinson was introduced directly. The solution used contains 20 cc of distilled water, 1 gram streptomycin, 25 to 100 mg hydrocortisone and 1 mega crystalline penicillin. The solution is injected slowly and pain resistance and spill of solution is noted. After the hydrotubation the patient returns home. The hydrotubation is carried out at weekly intervals.

RESULTS

During the period of the prospective study a total of 280 cases with blocked fallopian tube received hydrotubation. However for this study 6 cases have been excluded because semen analysis of the husbands showed azospermia. A further 54 cases were excluded because of anovulatory cycles. Thus only 220 cases are presented for statistical analysis.

Table 1 shows that the majority of patients are in the age group 25 to 29 yrs. Table II shows that the majority in this study suffer from primary infertility. Table III shows that the majority have had 2 to 4 years of infertility before they came for investigations. Table IV shows that in 168 cases the tubes were blocked at tubal insufflation. Table V shows the pregnancy rates for the three groups. For tubal Co2 pressure of 100 to 150 there were 8 pregnancies for 28 cases giving pregnancy rate of 28.5 per cent. For 150 to 200 there were 9 pregnancies for 23 cases giving pregnancy rate of 39.1 per cent. For blocked tubes there were 46 pregnancies out of 169 cases giving a pregnancy rate of 27.2 per cent.

Table I**Study population according to ethnicity and age**

Ethnic Group	Age in years					Total
	20-24	25-29	30-34	35-39	40+	
Malays	10	20	6	3	0	39
Chinese	20	80	36	16	1	153
Indian	5	13	7	2	1	28
	35	113	49	21	2	220

Table II**Study population according to ethnicity and infertility**

Ethnic	Primary Infertility	Secondary Infertility	Total
Malays	23	16	39
Chinese	100	53	153
Indian	20	8	28
	143	77	220

Table IV**Study population according to ethnicity and the tubal insufflation pressure when Co2 is passed**

Ethnic Group	Pressure when Co2 Passed		Fallopian Tubes Blocked	Total
	100-150	150-200		
Malays	5	6	28	39
Chinese	21	16	116	153
Indian	2	1	25	28
	28	23	169	220

COMMENTS

Fallopian tube occlusion as a cause of infertility accounts for 25 to 30 per cent of attendances at infertility clinics. The advent of laparoscopic visualisation of the ovary, fallopian tube and uterus, coupled with dye injection tests has been a great help in the investigation of infertility cases. But in centers where laproscopic diagnosis is not available or where there is delay in getting hysterosalpingogram, hydrotubation is a simple alternative in the diagnosis and management of cases of fallopian tube occlusion. Tubal occlusion is diagnosed by tubal

Table III**Study population according to ethnicity and number of years of married or last pregnancy**

Ethnic Group	No. of years married or no. of years since last pregnancy						Total
	0-2	2-4	4-6	6-8	8-10	10+	
Malays	6	11	12	5	0	5	39
Chinese	29	69	27	19	3	6	153
Indian	7	6	4	5	3	3	28
	42	86	43	29	6	14	220

Table V**Pregnancy rates according to insufflation pressure**

Tubal insufflation pressure	Number of Hydrotubations										Total no. of women	Total no. of resultant pregnancies
	1	2	3	4	5	6	7	8	9	10		
100-150	0	1	2	5	4	3	3	2	4	4	28	8 (28.5%)
150-200	1	1	2	3	3	3	4	2	2	3	24	9 (37.5%)
Blocked tubes	4	5	15	23	24	24	13	12	8	40	168	46 (27.3%)
Total	5	7	19	31	31	30	20	16	14	47	220	63 (28.6%)

Table VI
Pregnancy rates by the number of
hydrotubations made

No. of hydrotubations	No. of women	No. and % of resulting pregnancies
1	5	2 (40.0%)
2	7	3 (42.8%)
3	19	7 (36.8%)
4	31	10 (32.2%)
5	31	13 (41.9%)
6	30	7 (23.3%)
7	20	7 (35.0%)
8	16	5 (31.2%)
9	14	3 (21.4%)
10	47	6 (13.0%)
Total	220	63 (28.6%)

insufflation test and treatment by hydrotubation can be carried out as an office procedure by any doctor even in a busy gynaecology clinic. The technique is so simple that even the most junior doctor is able to do hydrotubation.

SUMMARY

In the above prospective study a total of 220 cases were given hydrotubations for tubal occlusion. These cases were followed up and 63 cases subsequently became pregnant, giving a pregnancy success rate of 28.6 per cent.

REFERENCES

- Johan Thambu (1974) Proceeding's of 9th Malaysia-Singapore Congress of Academy of Medicine 1974, Kuala Lumpur.
- Johan Thambu (1975) Treatment of tubal occlusion by hydrotubation, *Med. J. Malaysia* 30, 66-70.