

# STUDY OF SECOND TRIMESTER TERMINATION

(Study of 300 Cases)

by

MRS. H. N. SHAH,\* M.D.

and

K. M. BHATT,\*\* M.D., D.G.O.

## Introduction

Amniocentesis and intraamniotic injection of hypertonic saline to terminate pregnancy in the second trimester has attained place of great importance in this era of M.T.P. There is no uniformity in the methods for mid-trimester pregnancy termination. Because of non-availability and high cost of prostaglandins, hypertonic saline is very commonly used in India. Still there is no method which is safe and satisfactory.

The present study was undertaken with purpose to describe the clinical observations in 300 women who came for second trimester abortion and to evaluate the efficacy, safety and reliability of hypertonic saline instillation in amniotic cavity. Our institution is so far unable to get prostaglandins in spite of repeated efforts; under the circumstances, hypertonic saline instillation or hysterotomy was performed in all cases.

## Material and Method

This is a study of 300 cases of second

\*Senior Professor and Head.

\*\*Assistant Professor.

The Department of Obstetrics and Gynaecology, M. P. Shah Medical College, Jamnagar.

The paper read in First Asian Conference on Induced Abortion and voluntary sterilisation at Bombay.

Accepted for publication on 28-8-79.

trimester termination admitted in department of Obstetrics and Gynaecology at Irwin Group of Hospitals, Jamnagar, from February 1977 to July 1978.

All the patients were admitted, detailed history was taken clinical examination and necessary investigations were done. Operative procedure, injection abortion interval and operative complication were noted.

Premedication 100 mg. Pethidine i/m + 0.6 mg Atropine i/m was given to every patient. They were asked to lie in supine position after emptying bladder. Under all aseptic precaution after the parts were properly sterilised and draped, 18 gauge spinal needle was passed in amniotic cavity. When free flow of liquor was obtained the needle was connected to a bottle containing previously prepared infusion of 20% saline, 200 c.c. Drip was allowed to run slowly. Per week of gestation 10 c.c. of saline was injected, i.e. at 14 weeks 140 c.c., 16 weeks 160 c.c. 20 weeks 200 c.c. But more than 200 c.c. was never injected. Injection was also not made when there was blood-stained liquor or blood.

When due to the size of the uterus abdominal amniocentesis was not possible, it was done transvaginally from the anterior or the posterior fornix. Whenever patient was willing for sterilisation,

abdominal tubectomy my modified Pomeroy's method was performed under local anaesthesia, except when the operation was thought to be difficult because of obesity or other reasons, spinal anaesthesia was given.

In few cases, it was not possible to get access to amniotic cavity or there was bloody tap. Fortunately some of them were for sterilisation and hence hysterotomy with tubectomy was done.

The injection time was noted, the operation was said to be successful when patient aborted within 72 hours of injection. Other cases were considered to be failures for whom either re-intraamniotic injection was done or when os was patulous, dilatation and evacuation was done.

All patients were asked to report sensation of heat on face, headache, flushing, severe abdominal pain, intense thirst, prickly sensation in hand and face. If any of this occurred procedure was discontinued immediately and rapid 5% glucose drip was given. Pulse and B.P. were recorded repeatedly. In no case serious problem arose.

Time of abortion was noted and products were examined to know completeness of abortion. D and E was done when placenta was retained after starting I/V 20 units pitocin drip in 5% Glucose.

All patients were given prophylactic antibiotics from the time of operation.

#### Observations

The number of patients in first trimester was 900 (75%) and in second trimester 300 (25%). When induced and spontaneous abortions were combined, 70% were induced abortions. Per 1000 live births there were 400 MTP.

Majority (85%) were Hindus. 63.67% of cases came from rural areas which reflects their ignorance, fear and lack of

facilities for seeking late admission. 90% of patients had income less than 300 rupees per month.

25.23% of patients were unmarried, separated or widows and nearly half of them came between 19 to 20 weeks which was to avoid hospitalisation for keeping it confidential. Only 8.3% were either married nullipara or para I. 66.3% were having parity 2 or more. 80% of patient reported between 16 to 20 weeks, which majority of whom were either unmarried or 4 or multipara. Ratio of legitimate to illegitimate pregnancy is 4/1. 2nd trimester illegitimate terminations are more and they came late.

Rate of contraception acceptance was 86.91%. 46.42% opted for tubal ligation and 24% preferred loop insertion. Acceptance of oral pills was low because majority of patients were rural, illiterate and of high parity.

It shows relation between parity and injection abortion interval. Majority of patients regardless of parity aborted within 13 to 48 hrs. (76.66%) failure to procure intra-amniotic injection had no relation to parity or marital status.

Table II shows relation between size of uterus and injection abortion interval. More patients were encountered to abort between 25-72 hours when size of the uterus was upto 14 weeks. Failure rate was more between 14 to 18 weeks. Failure was encountered in 28 cases.

Failures in 2nd trimester abortion are given in Table III.

1. Failure to enter amniotic cavity—16 cases (5.3%).

2. Failure to abort within 72 hrs.—12 cases (4%).

In the first group patients were for sterilisation, hysterotomy was done in 6 cases with abdominal tubectomy. In 1 patient extraamniotic injection was done

TABLE I  
Relation Between Parity and Injection Abortion Interval

Sr. No.	Injection abortion interval	Unmarried	Nullipara	1	2	3	4 & more	Total
1.	Less than 12 hrs.	5.26 (4)	—	10% (1)	—	13.2 (7)	9.37 (9)	7% (21)
2.	13-24 hrs.	39.47 (30)	33.33 (5)	20% (2)	20 (10)	24.53 (13)	41.66 (40)	33.33 (100)
3.	25-48 hrs.	39.47 (30)	53.33 (8)	40% (4)	58 (29)	43.39 (23)	37.5 (36)	43.33 (130)
4.	49-72 hrs.	9.21 (7)	13.33 (2)	20% (2)	6% (3)	3.77 (2)	5.3 (5)	7 (21)
5.	Failed.	6.57 (5)	—	10% (1)	16% (8)	13.09 (8)	6.25 (6)	9.23 (28)
Total:		25.33 (76)	5% (15)	33% (10)	16.66 (50)	17.66 (53)	32% (96)	100% (300)

TABLE II  
Relation Between Size of Uterus and Injection Abortion Interval

Sr. No.	I-I, interval	13-14 weeks	15-18 weeks	19-29 weeks	Total
1.	Less than 12 hrs.	7.54 (4)	9.65 (11)	4.5 (6)	7% (21)
2.	13-24 hrs.	16.98 (9)	31.58 (36)	41.25 (55)	33.33 (100)
3.	25-48 hrs.	37.7 (20)	43.85 (50)	45.11 (60)	43.33 (130)
4.	49-72 hrs.	26.41 (14)	3.5 (4)	2.25 (3)	7 (21)
5.	Failed	11.32 (6)	11.40 (13)	8.76 (9)	9.33 (28)
		17.66 (53)	38% (114)	44.33 (133)	100% (300)

TABLE III  
Failures in 2nd Trimester Abortion and Their Management

Sr. No.	Type of failure	No. of cases	Management	
1.	Failure to enter in amniotic cavity	16	Hysterotomy with TL (6)	Exteramniotic 20% saline (1)
2.	Failure to abort.	12	4 aborted after 5 days	Reinstillation 20% saline (7)
Total:		28		MTP (9) Absconded (1)

and in 9 cases MTP was done with vacuum aspirator after introducing laminaria tents. Out of these 6 were 14 weeks uteri and 3 were 15 to 16 weeks uteri.

In the second group, 1 patient absconded when she failed to abort after 4 days. In the remaining 11 cases, 4 aborted after 5 days and 7 aborted after reintraamniotic injection of hypertonic saline.

TABLE IV  
Complication in Second Trimester Terminations

Sr. No.	Complications	No. of cases	Percentage
1.	Retained product	15	5
2.	Pyrexia	4	1.33
3.	Haemorrhage	2	0.66
4.	Posterior cervical tear	1	0.33
5.	Coagulopathy	—	—
Total:		22	7.33

Table IV shows complication in second trimester terminations. Out of 300 cases, 22 had morbidity in immediate post-operative period. Fifteen cases (5%) had retained product, 4, 1.33% had pyrexia, all of these cases had injection abortion interval more than 72 hours. In 1 case there was posterior cervical tear.

#### Discussion

Majority of patients were coming from rural areas (63.66%) with low socio-economic status. 68% of Dass series (1972) belonged to low socioeconomic status. This does not vary much from other admissions as patients coming to government hospital are generally poor.

Second trimester abortions formed 25% of all induced abortions. In Dass series (1972) 7.5% of the induced abortions were in second trimester. Incidence in this series is high probably because

majority of the patients are coming from rural areas.

Majority of the patients aborted between 13-48 hrs. The average injection abortion interval was 38.25 hrs. In Mehta's series (1975) majority aborted between 24-48 hrs. In Dass series (1975) average Injection abortion interval was 26.7 hrs. In Kunder and Hemlatha series (1964) injection abortion interval ranged from 5 hrs. to 52.5 hrs. with average 31 hrs. Alwani (1975) reported 24-48 hrs. Goodlin (1971) reported injection abortion interval 34.6 hrs which could be reduced to 23 hrs. with pitocin drip. This time difference could not be explained as all the factors concerned with the technique were almost the same and exact mechanism of action still remains obscure.

Amniocentesis failed in 5.3% of cases of which 2% were in 14 weeks. In Mehta's series, 2.85% amniocentesis failed. In Dass series (1975) in 10% amniocentesis failed. Less the duration of pregnancy more the % of failure of amniocentesis.

Failure to terminate the pregnancy was encountered in 4% of cases. In Mehta's series 5% failed to abort within 96 hrs. 3.7% of Dass series failed to terminate. Alpern (1968) and Mackenzie (1971) reported 11.7% and 2.5% failure to terminate pregnancy respectively.

Retained products were found in 5% of cases, findings in correlation with Dass (1973). Mehta (1975) reported retained product in 7.85%.

Fever was found in 0.66% of cases the incidence is very low in comparison to Dass (1973) who reported fever in 12.5% of cases and Wagner and Fuchs (1962) reported in 7.5% of cases.

No maternal death occurred in this series and same results are reported by Dass (1973) Mehta (1975) and Alwani

(1975) Cameron and Dayan (1966) reported 2 maternal death due to widespread cerebral infarction. They used 400 c.c. 20% saline in 1 and 150 c.c. 30% saline in other. The cerebral infarction was due to strong saline.

### Summary

Three hundred cases of mid-trimester termination with hypertonic saline instillation into amniotic cavity were studied at Irwin Hospital at the Department of Obstetrics and Gynaecology, Jamnagar from February 1977 to July 1978. A detailed study of the Social, Medical and Surgical aspects of the subject was carried out.

Majority of patients were Hindus, married coming from rural areas with low socio-economic conditions. Average injection abortion time was 38.25 hours.

The overall complication rate was 7.32%. Thus morbidity was low and there was no mortality. Majority of patients accepted contraception and half of them preferred permanent method.

Method had been shown to be more successful when uterus was 16 weeks size or more. The solution used was 20% saline and amount never exceeded 200 ml.

### Conclusion

Despite the risk and complications, hypertonic saline abortion remains the most satisfactory method for inducing mid-trimester abortion. In many places like ours, where prostaglandins are not available, hypertonic saline is the most acceptable and practical method for second trimester abortions.

### References

1. Alpern, W. M., Charles, A. G. and Friedman, E. A.: *Am. J. Obstet. Gynec.* 100: 250, 1968.
2. Alwani, C. M., Gogte, S. G. and Purandare, V. N.: *J. Obstet. Gynec. India.* 25: 176, 1975.
3. Cameron, J. M. and Dayan, A. D.: *Brit. Med. J.* 1: 1010, 1966.
4. Dass, A. P., Mukhopadhyay, P. and Dhawan, S.: *J. Obstet. Gynec. India.* 25: 323, 1975.
5. Goodlin, R. C.: *Am. J. Obstet. Gynec.* 110: 885, 1971.
6. Kunders, P. and Hemalatha, H.: *J. Obstet. Gynec. India.* 22: 160, 1972.
7. Mackenzie, J. M. Routar, A. and Movell, H. M. M.: *Clin. Obstet. Gynec.* 14: 107, 1971.
8. Mehta, A. Popat, N. and Purandare, B. N.: *J. Obstet. Gynec. India.* 25: 155, 1975.
9. Wagner, G. and Fuchs, F.: *J. Obstet. Gynec. British C'wealth.* 69: 131, 1962.