

## TERMINATION OF MID TRIMESTER PREGNANCY BY INTRA-AMNIOTIC INJECTION OF EFCORLIN

by

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Intra-uterine development and well being of foetus has been a subject of great interest since time immemorial but it is only since last one decade, that the termination of pregnancy medical science has emerged and consequently there has been striking change in the modern obstetrical thinking.

Apparently, therefore, with the emergence of advanced measures like suction evacuation, M.R., intra-amniotic prostaglandin, intra-muscular prostaglandin, intra-amniotic 20 per cent saline infusion, intra-amniotic 50 per cent glucose infusion, laminaria tent followed by syntocinon drip, extra-amniotic catheter method and hysterotomy, the women are attending hospitals and private clinics frequently for mid-trimester termination of pregnancy. This necessitates an easily available measure which will consistently induce second trimester abortion with certainty without any complication.

In these days of obstetrical practice the role of steroids in myometrial contractility and their effect on labour is under trial Moti *et al* (1973) reported successful induction of labour in patients with post term pregnancy after intra-amniotic injection of betamethazone but the same treatment failed to induce labour in pregnancies with anencephalic foetus. Nwosu

*et al* (1976) reported successful induction by intra-amniotic injection of hydrocortisone. Craft *et al* (1975) successfully induced labour by betamethazone administered intramuscularly. Murphy (1973) indicated a relationship between cortisol levels and onset of uterine contractility in human.

In India, mid trimester abortion has been effectively induced by intra-amniotic injections of either hydrocortisone (Parikh *et al*, 1978) or by betamethazone (Baveja *et al*, 1979).

Finding this method newer, easy and practicable the author has taken up this study to establish the value and feasibility of this method in the context of local condition.

### Material and Methods

The cases for the present study were selected from the Indoor patients, private and antenatal clinic of the Obstetrics and Gynaecology department of Darbhanga Medical College Hospital.

The duration of pregnancy were 16 to 22 weeks and there were no other medical and obstetrical problems.

Amniocentesis was done with the help of 10 cm. long No. 18 needle. The site of amniocentesis was 1½" above the pubic symphysis slightly to the left or right according to the convenience, under the effect of intramuscular diazepam. Then 5 to 10 c.c. of amniotic fluid was aspirated to ensure that the needle is in the amniotic cavity. Efcorlin was injected and also

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(10 units) oxytocin was injected with the separate syringe in desired patient.

The method was considered unsuccessful if the abortion had not occurred within 96 hours.

#### Observation

Fifty women of different age group ranging 16 to 38 years, free of major cardiac, renal and/or metabolic diseases comprised the study group.

The women who sought voluntary in-

terruption of pregnancy on the socio-economical grounds were unmarried girls and widows and so the parity includes both primigravidae as well as the multigravidae. The average gestational duration were 16 to 22 weeks, calculated from L.M.P.

Complete abortion, incomplete abortion and failure were defined in Table II. It was encouraged to explore the uterus with an instrument when in doubt concerning the complete placental expulsion.

TABLE I  
*Success Rate in Different Weeks of Gestation*

Weeks of Gestation	No. of cases	Efcorlin 400 mg. with Syntocinon 10 Units	Efcorlin alone	Failure rate
16	10	6	4	4 (40%)
18	14	7	7	4 (28.5%)
20	24	14	10	3 (12.5%)
22	2	2	—	—

TABLE II  
*Result With Different Strength of Efcorlin*

No. of cases	Efcorlin in mg.	Complete abortion	Incomplete abortion	Average time in hour (Injection abortion time)	Failure
11	400	7	1	51	3 (27.2%)
4	600	1	—	65	3 (75%)
6	300	4	—	58	2 (33.3%)

TABLE III  
*Efcorlin Alone With Different Weeks of Gestation*

No. of cases	Duration of pregnancy in week	Aborted completely	Incomplete abortion	Failure
4	16	2	—	2 (50%)
7	18	3	—	4 (55%)
10	20	7	1	2 (20%)
	Success rate	..	62 per cent	
	Failure rate	..	38 per cent	

The four category of the women were selected according to their gestational periods calculated from the L.M.P.—16 weeks, 18 weeks, 20 weeks and 22 weeks. Out of 10 patients having 16 weeks gestation, 6 were treated with Efcorlin 400 mg. and 10 Units of oxytocin and the rest 4 patients with the different strength of Efcorlin alone, including those in whom the drug was injected inspite of the bloody tap. Four of the combined Efcorlin and oxytocin series and 2 of Efcorlin series were aborted completely except 1, who had incomplete abortion in which the blunt curettage was done under the effect of 2 ampules of I.V. calmpose. Out of the 4 failed patients, 2 were of combined series of oxytocin with Efcorlin and were nulliparous aborted completely after giving the I.V. syntocinon drip, whereas the 2 remaining patients had only intraamniotic Efcorlin; 1 was nulliparous and was treated with suction evacuation and 1 had hysterotomy with bilateral partial salpingectomy, as she was the mother of 7 children. The success rate was 60 per cent, including both the series.

of Efcorlin and oxytocin series all aborted completely except 1 in which the removal of placenta was done by blunt curettage under the effect of 2 ampules of I.V. calmpose. In the 7 patients of Efcorlin series, 3 aborted completely and 2 required oxytocin I.V. drip, both were multiparous with previous full term normal delivery. The next 2 patients left against medical advice and the follow up was not done.

Out of 24 patients of 20 weeks gestation, 21 aborted completely (87.5%). In the 24 patients of 20 weeks gestation, 14 received Efcorlin and oxytocin and 13 aborted completely, whereas one required 6 ampules of unitocin intramuscular at the interval of  $\frac{1}{2}$  hour and aborted completely. The remaining 10 of 20 weeks gestation who had only Efcorlin of different strength, 7 aborted completely and in 1 case placenta was taken out by blunt curettage under the effect of 2 ampules of I.V. calmpose. The 2 failures left against the medical advice.

The 2 patients of 22 weeks gestation

TABLE IV  
*Efcorlin (400 mg.) With Oxytocin (10 Units)*

No. of cases	Duration of pregnancy in weeks	Average time in hours	Complete abortion	Incomplete abortion	Failure
6	16	64	3	1	2
7	18	59	6	1	—
14	20	37	13	—	1
2	22	25	2	—	—
Success rate			89.7 per cent		
Failure rate			10.3 per cent		

The 14 patients of 18 weeks gestation were treated in which 10 aborted (71.5%). Out of 14, 7 had Efcorlin with 10 units of oxytocin and 7 had only Efcorlin of different strength. In the 7 patients

were treated with Efcorlin and oxytocin, both aborted completely without any complications. Out of the 2, 1 was nulliparous and other multiparous with 2 full term normal deliveries.

### Discussion

In an earlier report, 13.3 per cent failure rate was noted with an initial 400 mg. of Efcorlin with 10 I.U. oxytocin and the average injection abortion time was 62 hours 41 minutes (Parikh *et al*, 1978). In the present study, the failure rate was only 10.3 per cent with the same strength and composition and the average time taken for abortion was 46 hours 20 minutes. With the increasing duration of pregnancy the injection abortion time and failure rate decreases.

No incomplete abortion and no side effect was noted by Parikh *et al* (1978), but in this study out of 29 cases, 3 have incomplete abortion specially in early mid trimester with no side effect. Parikh *et al* (1978) stated that the drug can be safely injected even if the amniocentesis produces blood stained liquor and here also the drug was used in blood stained liquor without any complication.

So far our experience is concerned the intra-amniotic injection of Efcorlin 400 mg. with 10 units oxytocin in the management of 2nd trimester is the first and safest choice for termination of pregnancy.

### Summary

With the liberalisation of abortion Law in India, women frequently seek voluntary interruption of pregnancy specially in mid trimester. Out of the methods available for such termination the intra-amniotic Efcorlin alone or in combination with intra-amniotic oxytocin assumes the first choice in the day to day practice.

Different doses of the Efcorlin were used e.g. 300 mg., 400 mg., and 600 mg. So far the success is concerned the 400 mg. Efcorlin was consider the best.

When Efcorlin alone and Efcorlin with oxytocin were considered the results were still better in cases of oxytocin with 400 mg. Efcorlin and the success rate was 89.7 per cent (86.7% in Parikh *et al* cases), in the present series without any complications and the side effects. It was experienced that, with increasing duration of pregnancy the success rate is still better with shorter injection abortion time.

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