

## MODIFIED TECHNIQUE OF EXTRA AMNIOTIC RIVANOL INSTILLATION FOR SECOND AND THIRD TRIMESTER PREGNANCY TERMINATION

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There are several methods of inducing labor in the second and third trimesters; the ultimate aim is always the most physiologic delivery of the fetus and safety of the mother (5, 7).

Extraamniotic Rivanol instillation was first described by Kashiwara and Fujibayashi in 1952 (3). After extensive investigations, 0.1% Rivanol solution applied extraovularly has gained widespread acceptance. The drawback of this method is the long induction-abortion interval (1, 2, 4, 6). In order to shorten this period a modified technique of extraamniotic Rivanol instillation was described here.

After ultrasonographic localization of the placental site, sterile conditions a Foley catheter (No:14) was introduced via the cervical canal into the extraovular space and directed to the contralateral side of the placental location, up to the upper uterine segment and half of the Rivanol solution at 37°C calculated for uterine size were instilled through the catheter. The foley balloon was then filled with Rivanol solution and the catheter was drawn until the balloon was placed just above the internal cervical orifice. After gentle traction applied to the catheter the other half of the Rivanol solution was slowly instilled. The catheter was then ligated at its lower end and attached to the inguinal region. Dosage used was 5-7 ml of the 0.1% Rivanol solution per gestational week estimated from the uterine size, the maximum being 150 ml. Prophylactic antibiotics was started the night before the procedure. The catheter was left in place for 48 hours or expelled with the fetus if the patient aborted earlier. If the abortion had not ensued in 48 hours, the catheter was withdrawn and intravenous infusion of oxytocin was given.

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The method described here was performed on 160 missed abortion or intrauterine fetal death and 34 therapeutic abortion cases in the second and third trimesters in our department. The instillation abortion interval was between 18.5 and 28.2 hours (Table 1, Figure 1). These periods were shorter than those reported previous (1, 2, 4, 6).

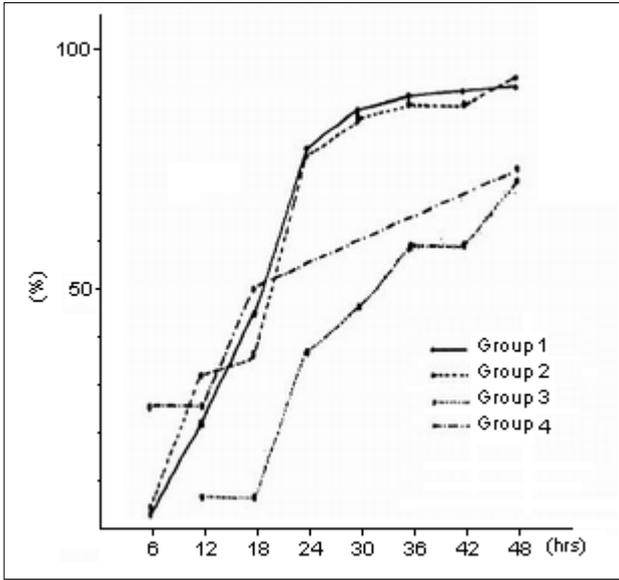
As it is postulated stimulation of increased PGF<sub>2α</sub> C release from the decidua and fetal membranes may be the final mechanism of action for Rivanol. The shorter abortion time observed in the present study might be explained by the differences in the methods used. The mean instillation-abortion interval in missed abortion or intrauterine fetal death cases was 18.7 hours where as in therapeutic abortion cases it was 27.6 hours.

The difference was found to be statistically significant (p<0.05). This might be explained by the progesterone levels. The difference in the mean instillation abortion

Table 1: Efficacy of modified extraamniotic rivanol instillation technique for second and third trimester pregnancy termination.

Groups	Rate of success in 48 hours (%)		Instillation abortion interval (hrs)
	Number	Percentage	
Second trimester missed abortion or intrauterin fetal death cases	132	92.4	18.5
Third trimester intrauterin fetal death cases	28	92.8	19.4
Second trimester therapeutic abortion cases	30	73.3	28.2
Third trimester therapeutic abortion cases	4	75.0	22.8
Group 1 + Group 2	160	92.5	18.7
Group 3 + Group 4	34	73.5	27.6

Figure 1: Percentage of patients aborting per six hours unit of time.



interval was highly significant in the second trimester cases between missed abortion or intrauterine fetal death and therapeutic abortion cases ( $p < 0.001$ ), whereas the difference in the third trimester cases was not found to be significant. The explanation of this difference needs further investigation.

The extraamniotic Rivanol instillation method for the termination of second and third trimester pregnancies is a simple, efficacious and harmless procedure with seldom complications. The long induction abortion interval which is the only drawback of this method can be shortened by the modification of the method as described in this study.

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