

**A CLINICAL STUDY TO SEE THE EFFECTS OF VALENTHEMATE BROMIDE INJECTION BY DIFFERENT ROUTES ON UTERINE CONTRACTION DURING VAGINAL DELIVERY.**

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**ABSTRACT**

**Aims and Objectives:-** To study the effects of valenthemate bromide injection by different routes on uterine contraction during vaginal delivery in primigravida. **Material and Methods:-** Study was carried out on pregnant primigravida ladies (without any complications) admitted for delivery in department of Gynecology B. R. D. Medical College Gorakhpur. The ladies were divided into three groups. Group A received saline, group B received epididol intramuscularly while group III received epididol intravenously. Uterine contractions during vaginal delivery in primigravida were noted. **Results:-** The difference in uterine contractions was not significant statistically in all the three groups. Mean rate of cervical dilatation was 0.91, 1.48, 2.16 cm/hour

in groups I, II, and III respectively. **Conclusion:-** The mean uterine contractions are not altered significantly by injection different routes of epididol.

**KEYWORDS:** Epididol, uterine contractions, routes.

**INTRODUCTION**

The Valenthemate (Epididol) is a smooth muscle relaxing agent and its favourable results in preclinical and clinical studies have made the obstetricians a choice to be used during the vaginal delivery.<sup>[1-4]</sup> Vaginal delivery is preferred by most of the females provided the agony,

pain and distress associated with this is minimized. The obstetricians are also in favour for vaginal delivery due to added advantages for the new born and less risk involvement for the female.<sup>[5-7]</sup> There are very few studies in literature related to the effect of epidosin on uterine contractions during vaginal delivery. Therefore present study has been planned to know the effect of epidosin on the uterine contractions in primigravida.

## MATERIAL AND METHODS

Patients admitted in the labour room in department of Obstetrics and Gynaecology of Nehru Chikitsalaya, B. R. D. Medical College Gorakhpur were selected for the present study. The study was approved from the institutional ethics committee. The total duration of study was of eighteen months. A total of 150 uncomplicated primigravidae with gestational age of more than 37 weeks were taken for present study. The inclusion criteria were pregnancy with at least 37 weeks completed, cervical dilatation 3-4 cms, regular uterine contractions with frequency of 2-3 contractions every 10 minutes and cephalic presentation. Exclusion criteria were patients with premature labour, uterine inertia, cephalo-pelvic disproportion, polyhydramnios, multiple pregnancy, associated medical, surgical or obstetrical complications. Patients were randomly divided in to three groups. Control group (group I) was treated with normal saline. Group two received epidosin 1ml by intramuscular route every half hour for 3 doses. Group three pregnant ladies received epidosin 1ml intravenously every thirty minutes for 3 doses. A complete general, systemic and local examination was done. The relevant investigations including hematological, renal, V.D.R.L. and blood groups and Rh typing were performed to know the significant variations among the ladies. Those who showed abnormal results were excluded from the study. Fundal height, presentation, lie, uterine contractions and foetal heart rate were observed. Per-vaginal examination was done under perfect aseptic conditions and findings were noted. The presentation, position, station of head, absence of cephalopelvic disproportion and presence of membranes were confirmed. Cervix was studied in detail with special reference to consistency, dilatation, effacement and position. The data were analyzed by using unpaired student 't' test and  $p < 0.05$  was considered as statistically significant.

## RESULTS

A total of 150 pregnant ladies (age group 22 to 26 years) were observed during this study. Most of the females were belonging to lower socioeconomic strata in all the groups. The distribution of cases in all the groups according to station of head is presented in **table.1** .

Comparison of groups according to effacement of cervix at the time of admission is presented in **table.2**. Comparison of duration of second stage of labour is presented in **table3**.

**Table1: Distribution of cases according to station of head**

Station of Head	Control group	Intramuscular group	Intravenous group
Floating	04	03	02
Engaged	46	47	48
Total	50	50	50

**Table 2: Distribution of cases in all the groups according to effacement of cervix at the time of admission**

Effacement	Control	Intramuscular	Intravenous
50 to 60%	12	20	18
60 to 70%	10	17	18
70 to 80%	24	11	13
➤ 80%	4	2	1
Total	50	50	50

**Table 3: Comparison of duration of second stage of labour**

Group	Total cases	Range (Minutes)	Mean (Minutes)	±S.D
Control	50	35.2 to 60.7	45.7	5.98
Intramuscular	50	34 to 56	43.8	7.8
Intravenous	50	35.7 to 65.6	48.9	5.98

## DISCUSSION

The aim of obstetricians is to facilitate the process of delivery. This may require manual assistance, surgical as well as medical. The medical assistance is to reduce the time duration of different stages of labour and reduction of hemorrhage. Number of indigenous and synthetic compounds have been tried to achieve these aims and objectives. Valenthemate bromide is a spasmolytic agent and has shown reduction in time duration of different stages of labour in studies. The findings of present study suggest that there is no significant reduction in stage II and III when delivery is assisted by epidural.<sup>[8-11]</sup> There was also no significant difference between the group II and III. The mean duration of stage II and III were 45 minutes and 13 minutes respectively. The blood loss during the vaginal delivery was also not different significantly. The mean rate of cervical dilatation was  $0.91 \pm 0.53$  cm/hour in control group,  $1.48 \pm 0.73$  cm/hour in intramuscular group and  $2.1 \pm 1$  cm/hour in intravenous group. There was 73.5% more increment in rate of cervical dilatation in intravenous groups. When intramuscular and intravenous groups were compared with each other, the rate of cervical dilatation was increased by 0.68 cm/hour (46%) ( $P < 0.05$ ). Commonest side effects were transient tachycardia, dryness of mouth, vomiting and flushing

of skin. There were no maternal morbidity, and mortality. The findings are suggestive of effectiveness of use of epidosin in enhancing the cervical dilatation as compared to the control group. The intravenous injections are more effective in reducing the duration as compared to intramuscular route without significant increase in side effects.

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