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Original Research

A comparative analysis of Drotaverine Hydrochloride and Valethamate Bromide in augmentation of labour

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ABSTRACT:

Background: Labor is a multifaceted physiological process that culminates in the delivery of the fetus after a painful contraction of the uterus produces cervical dilatation and effacement. The present study compared Drotaverine Hydrochloride &Valethamate Bromide in augmentation of labour. **Materials & Methods:**84 primigravida women in established labourwere divided into 2 groups of 42 each. Patients in group I were given 40mg Drotaverine Hydrochloride IM every two hourly and in group II were given 2ml (8mg) Valethamate Bromide. A vaginal examination was performed to monitor the development of labor. Records were kept on parameters like the length of the second stage of labor, the delivery method, the outcome for the newborn, and medication side effects. **Results:** The age group 18-22 years had 28 subjects in group I and 26 in group II and 23- 27 years had 16 in group I and 18 in group II. Active phase was 3.6 hours in group I and 4.8 hours in group II, second stage was 35.2 minutes in group I and 39.6 minutes in group II and third stage was 6.4 minutes in group I and 6.7 minutes in group II. The mode of delivery was NVD in 30 in group I and 32 in group II, forcep in 6 and 3, vacuum in 4 and 3 and LSCS in 2 and 4 in group I and group II respectively. The side effects were tachycardia in 1 and 0, xerostomia in 4 and 2, headache in 2 and 5, and hypotension in 3 and 2 patients in group I and group II respectively. The difference was non- significant (P> 0.05). **Conclusion:** In terms of augmentation of labor, drotaverine hydrochloride is reported to be superior to valethamate bromide.

Keywords: Drotaverine Hydrochloride, Fetus, Valethamate Bromide

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INTRODUCTION

Labor is a multifaceted physiological process that culminates in the delivery of the fetus after a painful contraction of the uterus produces cervical dilatation and effacement. The goal of both the laboring patients and the obstetrician is to deliver the baby as quickly as possible without endangering the health of the mother or the unborn child.[1] The goal of augmentation of labor is to treat prolonged labor and possibly prevent cesarean section by increasing the frequency, duration, and intensity of uterine contractions after labor begins, either by artificially rupturing the membranes or by intravenous oxytocin infusion.[2]

This procedure can be carried out following either an induction or a spontaneous start of labor. The goal of augmentation is to lessen the negative effects that extended labor has on the mother and the fetus. Early in their careers, obstetricians are always taught the well-known proverb "a woman in labor should not allow the sun to set twice."[3,4] There are several ways to increase labor productivity, including amniotomy, cervical stretching, sweeping of the membranes, and mechanical techniques.pharmacological techniques have been employed to abbreviate labor and relieve pain in order to speed up the first stage of labor: oxytocin, valethamate bromide, scopolamine, and drotaverine hydrochloride.[5] The present study compared Drotaverine Hydrochloride &Valethamate Bromidein augmentation of labour.

MATERIALS & METHODS

Thepresent study comprised of 84 primigravida women in established labour. The written informed consent was obtained from all subjects.

Data such as name, age, etc. was recorded. Patients were divided into 2 groups of 42 each. Patients in group Iwere given 40mg Drotaverine Hydrochloride IM every two hourly and maximum of 3 doses if necessary and in group II were given 2ml (8mg) Valethamate Bromide every half hourly upto maximum 3 doses at cervical dilation 3-4 cm and stopped at 7 cm or more. A vaginal exam was performed to assess the cervical dilatation and effacement, head station, membrane status, and pelvic adequacy. Every four hours, a vaginal examination was performed to monitor the development of labor. Records were kept on parameters like the length of the second stage of labor, the delivery method, the outcome for the newborn, and medication side effects. Results were recorded in both groups. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Age group (years)	Group I (Drotaverine Hydrochloride (40 mg)	Group II (Valethamate Bromide (8 mg)
18-22	28	26
23-27	16	18

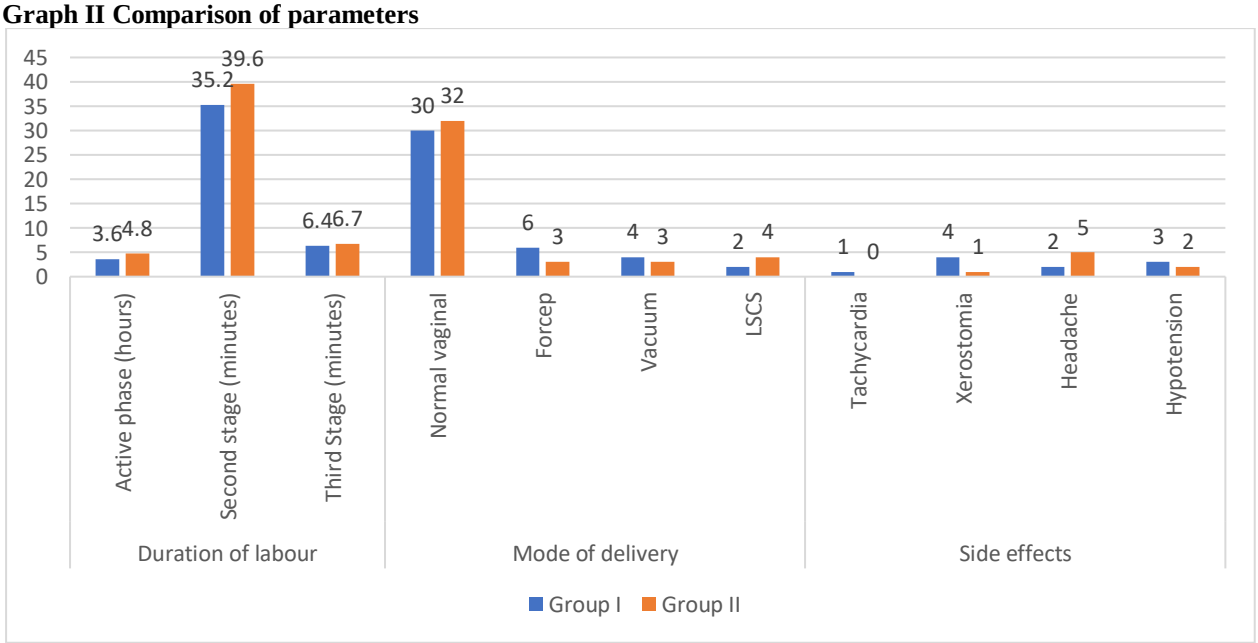
Table I shows that age group 18-22 years had 28 subjects in group I and 26 in group II and 23- 27 years had 16 in group I and 18 in group II.

Table II Comparison of parameters

Parameters	Variables	Group I	Group II	P value
Duration of labour	Active phase (hours)	3.6	4.8	0.01
	Second stage (minutes)	35.2	39.6	
	Third Stage (minutes)	6.4	6.7	
Mode of delivery	Normal vaginal	30	32	0.84
	Forcep	6	3	
	Vacuum	4	3	
	LSCS	2	4	
Side effects	Tachycardia	1	0	0.71
	Xerostomia	4	1	
	Headache	2	5	
	Hypotension	3	2	

Table II, graph I shows that active phase was 3.6 hours in group I and 4.8 hours in group II, second stage was 35.2minutes in group I and 39.6minutes in group II and third stage was 6.4minutes in group I and 6.7minutes in group II. The mode of delivery was NVD in 30 in group I and 32 in group II, forcepin 6 and 3, vacuum in 4 and 3 and LSCS in 2and 4 in group I and group II respectively. The side effects were tachycardiain 1 and 0,xerostomia in 4 and 2, headache in 2 and 5, and hypotension in 3 and 2 patientsin group I and group II respectively. The difference was non- significant (P> 0.05).

Graph II Comparison of parameters



DISCUSSION

Careful evaluation of consistent uterine contractions accompanied by increasing cervical effacement and dilatation is necessary for the diagnosis of active labor.[6]This diagnosis is challenging because there are numerous patterns that vary depending on the woman's parity. In multiparous women, the diagnosis of labor is presumably more difficult.[7] At the time of delivery, the cervix may occasionally be a few centimeters dilated without any noticeable contractions and before the cervix effaces.[8] Days or even weeks before labor begins, this state could exist. Labor is typically shorter than for women who are primiparous once regular contractions are established.[9,10]The present study compared Drotaverine Hydrochloride &Valethamate Bromidein augmentation of labour.

We found that age group 18-22 years had 28 subjects in group I and 26 in group II and 23- 27 years had 16 in group I and 18 in group II. Sharma et al[11]compared the efficacy and safety of drotaverine hydrochloride and valethamate bromide in shortening the duration of labor.150 nulliparous women in established labor with cervical dilation of 4 cm, 50 women were given drotaverine (group I), 50 women were given valethamate (group II) and another 50 women were not given any medication (group III). Duration of labor, mode of delivery, side effects, and neonatal outcome were measured in all cases. In the three groups, 100%, 96% and 46% women delivered within 6 h, respectively. The injection-to-delivery interval was significantly reduced in the drotaverine group (193.96 min) in contrast to the valethamate group (220.68 min) and control group (412.84 min). The rate of cervical dilation was highest in the drotaverine group (2.04 cm/h) compared with the valethamate bromide group (1.86 cm/h) and control group (1.01 cm/h). There were no major maternal or fetal adverse effects in any group, but minor side effects were more common in the valethamate group.

We found that active phase was 3.6 hours in group I and 4.8 hours in group II, second stage was 35.2 minutes in group I and 39.6 minutes in group II and third stage was 6.4 minutes in group I and 6.7 minutes in group II. The mode of delivery was NVD in 30 in group I and 32 in group II, forcep in 6 and 3, vacuum in 4 and 3 and LSCS in 2 and 4 in group I and group II respectively. The side effects were tachycardia in 1 and 0, xerostomia in 4 and 2, headache in 2 and 5, and hypotension in 3 and 2 patients in group I and group II respectively. Madhu et al[12]evaluated the efficacy of Drotaverine hydrochloride and Valethamate bromide in the process of cervical dilatation and labour augmentation.There was a statistically significant difference in the mean injection-delivery times (time from first injection to delivery of the baby), which was 183.2 min (SD 78.8) in the Drotaverine group compared to 206.5 min (SD 69.7) in the Valethamate group, and 245 min (SD 70.9) in the control group. The mean cervical dilatation rate (cm/h) was 3 (SD 1.4), 2.4 (SD 0.9) and 1.9 (SD 0.6) in groups 1, 2 and 3, respectively, and these differences were statistically significant. There were no statistically significant differences in the duration of second and third stage of labour. Transient side effects such as foeto-maternal tachycardia, flushing of the face and dryness of mouth were noted with Valethamate. A few patients complained of headache in the Drotaverine group.

CONCLUSION

Authors found that in terms of augmentation of labor, drotaverine hydrochloride is reported to be superior to valethamate bromide.

REFERENCES

1. Anuj HK, Indu B, Krishna D, Krishna S. A comparative study of the efficacy of valethamate bromide with drotaverine in normal labour. ObstetGynaecol Ind. 2003; 53:568-70.
2. Zhang J, Branch DW, Ramirez MM, Laughon SK, Reddy U, Hoffman M, et al. Oxytocin regimen for labor augmentation, labor progression, and perinatal outcomes. ObstetGynecol2011;118:249-56.
3. O'Driscoll K, Jackson RJA, Gallagher JT. Active management of labour and cephalopelvic disproportion. BJOG An Int J ObstetGynaecol 1970.
4. Olah KS, Steer PJ. The use and abuse of oxytocin. ObstetGynaecol2015;17:265-71.
5. Philpott RH, Castle WM. Cervicographs in the management of labour in primigravidae: I. The alert line for detecting abnormal labour. BJOG An Int J ObstetGynaecol1972;79:592-8.
6. Soni M. Intravenous drotaverine hydrochloride vs valethamate bromide in acceleration of labour. ObstetGynaecol Today. 2008; 6:239-41.
7. Prakash HT, Shah SK. Role of valethamate bromide incervical dilatation. J ObstetGynaecol Ind 1987;38:746-766.
8. Madhu C, Mahavarkar S, Bhave S. A randomized controlled study comparing drotaverine hydrochloride and valethamate bromide in the augmentation of labour. Arch Gynecol Obstet. 2010; 282:11-15.
9. Mishra SL, Toshniwal A, Benerjee R. Effect of drotaverine on cervical dilation: A comparative study with epidosin. ObstetGynacol Ind. 2002; 52(3):76-79.
10. Rouse DJ, McCullough C, Wren AL, Owen J, Hauth JC. Active-phase labor arrest: A randomized trial of chorioamnion management. ObstetGynecol1994;83:937-40.
11. Bidgood KA, Steer PJ. A randomized control study of oxytocin augmentation of labour. 1. Obstetric outcome. BJOG An Int J ObstetGynaecol1987;94:512-7.
12. Sharma JB, Pundir P, Kumar A, Murthy NS. drotaverine hydrochloride vs valethamate bromide in acceleration of labor. Int J Obstet Gynecol. 2001; 74:255-60.