

Original Research

A comparative study of different concentration of Hyoscine Butyl bromide in labor

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ABSTRACT:

Background: Labor pain is the worst pain ever. The present study was conducted to compare different concentration of Hyoscine Butyl bromide in labor. **Materials & Methods:** The present study was conducted on 64 prim gravid women with term gestation. All were divided into 2 groups of 32 each. Group I were given 40mg of intra-venous HBB and group II received 60mg of intra-venous HBB. In both groups, gestational age, APGAR score at 1st minute, 5th minute, blood loss, mode of delivery etc. was compared. **Results:** Gestational age in group I was 39.2 weeks, in group II was 39.4 weeks, APGAR score at 1st minute in group I was 8.6 and in group II was 8.7, APGAR score at 5th minute in group I was 8.6 and in group II was 8.6. Estimated blood loss in group I was 320 ml and in group II was 350 ml, injection to delivery time in group I was 325 minutes and in group II was 302 minutes, rupture of membranes to delivery was 98 minutes in group I and 116 minutes in group II. The difference was non- significant ($P > 0.05$). The mode of delivery in group I was abdominal seen in 14 in group I and 18 in group II. It was vaginal seen 10 in group I and 22 in group II. The difference was non-significant ($P > 0.05$). **Conclusion:** Both concentration of HBB found to be equally effective and comparable in terms of time of injection to delivery time, estimated blood loss, rupture of membranes to delivery and mode of delivery.

Key words: Delivery, Hyoscine Butylbromide, Labor

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INTRODUCTION

Labor usually starts within 2 weeks of (before or after) the estimated date of delivery. Exactly what causes labor to start is unknown. On average, labor lasts 12 to 18 hours in a woman's first pregnancy and tends to be shorter, averaging 6 to 8 hours, in subsequent pregnancies. Every woman's labor is different.¹ Few features are persistent lower back pain or abdominal pain, with a pre-menstrual feeling and cramps, painful contractions that occur at regular and increasingly shorter intervals, and become longer and stronger in intensity, broken waters ie membranes may rupture with a gush or a trickle of amniotic fluid.²

Prolonged Obstructed labor is one of the leading causes of maternal morbidity and mortality. Safe, proven and affordable measures employed to accelerate labor include use of Uterotonics such as oxytocin and early Amniotomy. Some anti-spasmodics such as Hyoscine Butylbromide

(HBB), Drotaverine Hydrochloride, Valethamate Bromide etc. have been tried.³

HBB is an alkaloid that acts by inhibiting cholinergic transmission in the abdominal and pelvic parasympathetic ganglia. Through this it relieves spasm in the smooth muscles of the female genital organs, aiding cervical dilatation. It can be administered via the parenteral route, oral route or as a suppository and does not cross the blood brain barrier.⁴ The present study was conducted to compare different concentration of Hyoscine Butylbromide in labor.

MATERIALS & METHODS

The present study was conducted in the department of Obstetrics & Gynaecology. It comprised of 64 prim gravid women with term gestation (>37 weeks and <42 weeks), 18 years or older, singleton gestation, cephalic presentation & spontaneous labor. All were informed regarding the study.

Ethical approval was obtained from institute prior to the study. General information such as name, age etc. was recorded. All were divided into 2 groups of 32 each. Group I were given 40mg of intra-venous HBB in the early active phase of labor i.e. 4 – 5cm and group II received 60mg of intra-

venous HBB. In both groups, gestational age, APGAR score at 1st minute, 5th minute, blood loss, mode of delivery etc. was compared. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Groups	Group I	Group II
Drug	40 mg HBB	60 mg HBB
Number	32	32

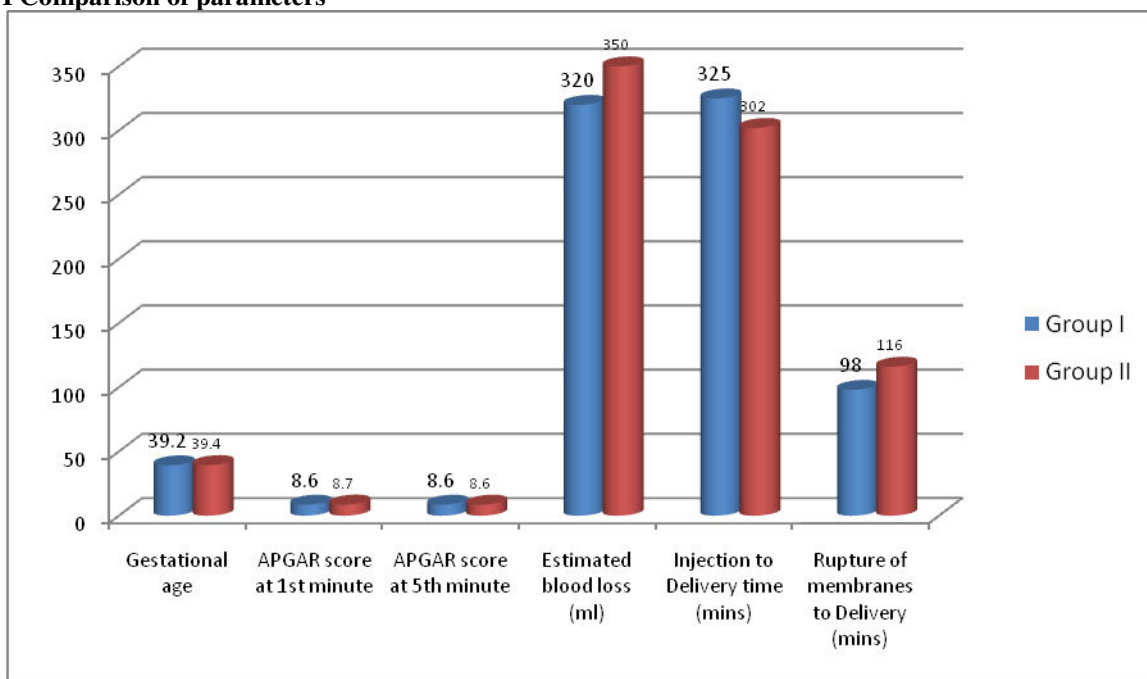
Table I shows that group I patients were given 40 mg of intra-venous HBB and group II received 60 mg of intra-venous HBB.

Table II Comparison of parameters

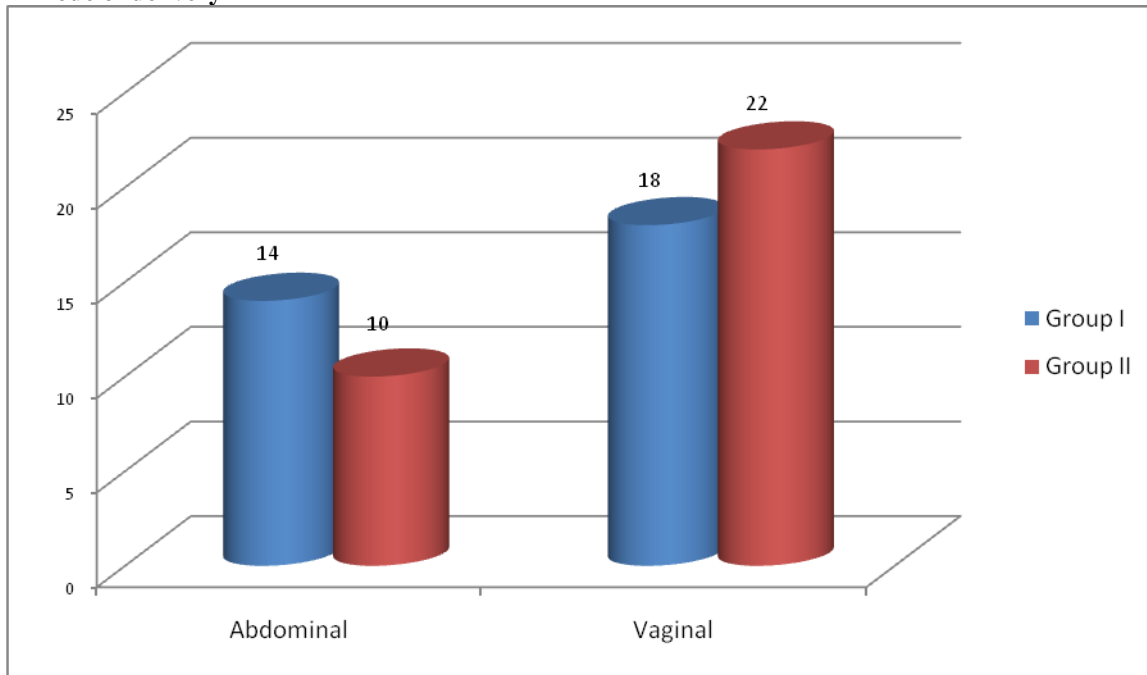
Parameters	Group I	Group II	P value
Gestational age	39.2	39.4	0.91
APGAR score at 1st minute	8.6	8.7	0.98
APGAR score at 5 th minute	8.6	8.6	1
Estimated blood loss (ml)	320	350	0.23
Injection to Delivery time (mins)	325	302	0.54
Rupture of membranes to Delivery (mins)	98	116	0.41

Table II shows that gestational age in group I was 39.2 weeks, in group II was 39.4 weeks, APGAR score at 1st minute in group I was 8.6 and in group II was 8.7, APGAR score at 5th minute in group I was 8.6 and in group II was 8.6. Estimated blood loss in group I was 320 ml and in group II was 350 ml, injection to delivery time in group I was 325 minutes and in group II was 302 minutes, rupture of membranes to delivery was 98 minutes in group I and 116 minutes in group II. The difference was non- significant (P> 0.05).

Graph I Comparison of parameters



Graph II Mode of delivery



Graph II shows that mode of delivery in group I was abdominal seen in 14 in group I and 18 in group II. It was vaginal seen 10 in group I and 22 in group II. The difference was non-significant ($P > 0.05$).

DISCUSSION

The aim in the management of labor is to achieve delivery of a normal, healthy child and to recognize and treat potential abnormal conditions before significant hazard develops for the mother and/or the fetus.⁵ Several randomized controlled trials have evaluated the effect of HBB on the active phase of labor, most showing a positive effect of reducing the duration of active phase of labor without triggering any maternal or neonatal adverse effects.⁶ The present study was conducted to compare different concentration of Hyoscine Butylbromide in labor.

In this study, 64 patients were divided into 2 groups. Group I patients were given 40 mg of intra-venous HBB and group II received 60 mg of intra-venous HBB. In a Jamaican Teaching Hospital, 129 women in labor were given either 20mg of HBB or 1cc of normal saline intravenously in the early active phase. The duration of active phase was shorter by an average of 31.7% in the HBB arm without significant change in the duration of the second and third stages of labor, and no difference in blood loss or in APGAR scores.⁷

We found that gestational age in group I was 39.2 weeks, in group II was 39.4 weeks, APGAR score at 1st minute in group I was 8.6 and in group II was 8.7, APGAR score at 5th minute in group I was 8.6 and in group II was 8.6. Estimated blood loss in group I was 320 ml and in group II was 350 ml, injection to delivery time in group I was 325 minutes and in group II was 302 minutes, rupture of membranes to delivery was 98 minutes in group I and 116

minutes in group II. Sirohiwal et al⁸ in their study a total of 114 primigravid women were with 40mg and 60mg HBB arms were comparable for socio-demographic and obstetric characteristics. Injection to delivery time was 340 (223–483) minutes in the 40mg arm and 305 (253–475) minutes in the 60mg arm, a difference that is not statistically significant. Seven (12 %) and five (9 %) of patients in the 40mg and 60mg arm respectively needed delivery via caesarean section. 5 minute APGAR scores were 9.7 in the 40mg arm and 9.8 in the 60mg arm. Estimated blood loss was 300mls in the 60mg arm and 350mls in the 40mg arm ($p=0.152$).

We observed that mode of delivery in group I was abdominal seen in 14 in group I and 18 in group II. It was vaginal seen 10 in group I and 22 in group II. Grouzt et al⁹ examined medical records of 38,252 women who delivered in one medical center from January 2005 to December 2009. Of these, 96(0.25%) sustained third or fourth-degree perineal tears. Begley et al¹⁰ conducted a study to show that ‘active management’ is superior to ‘expectant management’ in terms of blood loss, postpartum hemorrhage and other serious complications of the third stage of labor.

CONCLUSION

Authors found both concentration of HBB found to be equally effective and comparable in terms of time of injection to delivery time, estimated blood loss, rupture of membranes to delivery and mode of delivery.

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