Buscopan Application as an Analgesic in Primiparas

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ABSTRACT

Introduction: Scopolamine butylbromide or Buscopan is a drug that belongs to a group of spasmolytic agents. Its clinical application is found during childbirth, especially during the first stage of labor. It has a direct effect on the smooth muscles of the pelvis and a small cervical-uterine plexus. The study is conducted at the Clinic of Obstetrics and Gynecology of the University Clinical Centre in Sarajevo and included 100 primiparas. The respondents were divided into two groups. To the test group is administered Buscopan 40mg in 500ml of saline, during the first stage of labor and dilatation of 4-5 cm. The control group did not receive Buscopan.

Results: Conducted is a comparative analysis where it was found that among the respondents of the test group, the time of active labor reduced to about 1 hour and 45 minutes. On a scale of pain intensity, decrease started after 10 minutes following the Buscopan application. Apgar score did not differ significantly. But the pain decreased in 54.54% of primiparas in the test group. On the basis of this study and according to the results we can come to the conclusion that the effectiveness of Buscopan as analgesics during childbirth in primiparas is very good.

Conclusion: The clinical application of the Buscopan is justified in obstetric practice in order to reduce the pain, especially in primiparas.

Key words: Buscopan, analgesic, primiparas.

1. INTRODUCTION

Buscopan is increasingly used in the delivery room. There are numerous studies on the Buscopan application during childbirth that have contradictory results, both in primiparas and multipara. Qahtani and colleagues conducted a study on the Buscopan application childbirth in sample of 52 pregnant women compared to 45 pregnant women in the control group. The first delivery stage was significantly shorter in the group who received Buscopan compared to the control group. Length of the second and the third stage was not significantly different compared to the test group. The average value of Apgar score and the incidence of caesarean sections are not significantly different compared to the test group. The study found that Buscopan does not affect any parameter of birth except that shortens its first stage (4). A study conducted in India has shown analgesic effect of Buscopan during childbirth. Study involved 104 pregnant women divided into two groups. To study group belonged pregnant women who received Buscopan. In 35.6% of pregnant women who used Buscopan pain was reduced during childbirth compared to the control group and also reduced was the duration of labor (5). Fardiazar in his study compared the effect of Buscopan in reducing pain and the duration of the first stage of labor. Study followed 120 pregnant women in the period 2009-2011. It was found that the application of Buscopan significantly reduced the duration of the first labor pain which lasted on average for 218.5 minutes, compared to the control group 339 minutes. Apgar score did not differ significantly (6). Sekhavat in its survey of 188 pregnant women evidence that Buscopan does not affect negatively on the mother.
and fetus during all phases of delivery and significantly reduces the duration of labor in relation to women who did not receive Buscopan during childbirth. The first stage of the labor in the study group lasted 186.8±125.6 minutes and in a control 260.4±120.9 minutes, p=0.001 (7). In India, a study is conducted on 104 primiparas in 2008, where was analyzed the analgesic effect of Buscopan during childbirth. Study compared two groups of 52 pregnant women. The first group was administered 40 mg of Buscopan, while the second group went through the labor without this therapy. The intensity of pain was 35.6% lower in the first group, and the duration of delivery was statistically significantly shorter in the group I compared to group II (8).

2. GOAL
The goal of this study was to examine the effect of Buscopan as analgesics during vaginal delivery.

3. MATERIAL AND METHODS
This was a prospective study, which included 110 pregnant women, divided into two treatment groups: test (n=55) and control (n=55) group. The study was conducted at the Clinic of Obstetrics and Gynecology, University Clinical Centre in Sarajevo. To respondents in the test group was administered 40 mg of Buscopan in 500ml of saline. The study included primiparas with dilatation of 4-5 cm and uterine contractions at 5min with duration of 30-50 seconds. All respondents who have had preeclampsia, bleeding, myometomy and iterative were excluded from the study. The collected data were statistically analyzed in SPSS ver. 20.0. The level of significance was set at p<0.05.

4. RESULTS
The research results are presented graphically. Figure 1 shows the intensity of pain in relation to the duration of labor among pregnant women in test and control group. On a scale of 1-5 (1-lowest, 5-highest), the average value of the pain intensity in respondents of the test group was 2.52, and the respondents of the control group significantly higher at 3.63 (p=0.031). With labor duration the intensity linearly increased in respondents of both groups.

Of the total number of respondents in the test group in 30 (54.54%) cases occurred the reduction of pain compared to the control group in the same period of delivery.

The average duration of the labor active phase in control group was 5h and 30 minutes, and among respondents of the test group was significantly shorter and was 3h and 45 minutes (p=0.001). Of the total number of subjects in the control group 5 labors were completed by Caesarean section, and in the test group that number was 3. There were no statistically significant differences in the average values of Apgar score in relation to the test groups (mean–8.57).

5. DISCUSSION
Muscarinic receptors antagonists are often referred to as parasympatholithics, because the selectively block the effects of activation of parasympathetic nerves. All muscarinic receptor antagonists, as a rule provoke similar peripheral effects, although some of them show a certain degree of selectivity (atropine and scopolamine are representatives of non-selective antagonist). Semisynthetic derivatives of scopolamine, hyoscine butylbromide...
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(HBB), also known as butylscopolamine (butyl-bromide group minimizing undesirable central nervous system side effects), is an antispasmodic drug used in many countries throughout the world for more than 60 years to treat abdominal pain (under the tradename Buscopan it is available as an enteral formulation to treat mild to moderate spasm in the gastrointestinal tract or for parenteral use to achieve fast onset relieve and stronger antispasmodic effects (1). It was first registered in Germany in 1951 and marketed in 1952, and has since become available worldwide both as a prescription drug and as an over-the-counter medicine in many countries (2). Active substance, butylscopolamine, also represents a semisynthetic derivative of Duboisia leaves. HBB acts by inhibiting cholinergic transmission in the abdominal and pelvic parasympathetic ganglia, thus relieving spasm in the smooth muscles of gastrointestinal, biliary, urinary tract and female genital organs, especially the cervico-uterine plexus and thus aiding cervical dilatation (3,4,5) - it is used to treat pain and discomfort caused by abdominal cramps, menstrual cramps, or other spasmodic activity in the digestive system. It found its clinical application during childbirth, especially during the first stage of labor (3). There are divided opinions in obstetric practice about its effect and effectiveness as an analgesic during labor (5,6). Spasmolytic drugs are frequently employed in delivery rooms to overcome cervical spasms and thus reduce the duration of labor and HBB has been used to shorten the duration of labor (7). Hyoscine/scopolamine has an excellent safety profile and as such has been approved by the Food and Drug Administration in the USA for preoperative use in women scheduled for cesarean section (7). The effect of the HBB when breastfeeding is still called into question, and generally not recommended for nursing mothers. Use of HBB is not recommended for children under six years of age.

6. CONCLUSION

Buscopan is a drug that has a positive effect on pain reduction during childbirth. The incidence of caesarean sections is not more frequent in pregnant women who use Buscopan, and it does not affect the value of Apgar score.

CONFLICT OF INTEREST: NONE DECLARED.

REFERENCES