

# The effect of Buscopan® on the labour duration in nulliparous parturients in Umuahia

Arinze Okeke<sup>1,2</sup>, Enyinnaya Nduka<sup>2</sup>, Emeka Nkwo<sup>2</sup>

1. Southport and Ormskirk NHS Trust. 2. Federal Medical Center Umuahia Nigeria

## Objective

- To determine the effect of Buscopan® (Hyoscine N-butyl bromide) on the duration of labour in nulliparous parturients in Umuahia, Nigeria

## Method

- This was a randomised, double-blind, placebo controlled study involving 134 nulliparous women admitted for spontaneous labour carried out at Federal Medical Center Umuahia, Nigeria.
- Data obtained was analyzed with the Statistical Package for Social Sciences (SPSS®) version 22.0 (2013, IBM, Armonk, New York, USA).
- Absolute and relative frequencies of categorical variables and mean and standard deviations of continuous variables were calculated. Continuous variables were analysed using t-test while categorical variables were analysed using Chi-square. P-value when less than or equal to 0.05 was taken as significant.

## Materials and Methods

- Recruitment was based on inclusion and exclusion criteria with 66 randomised into the test group and 68 into the control group.
- At cervical dilatation of 4cm or more, 40mg of Buscopan® was administered to the test group and 2mls of sterile water administered to the control group. Cervical dilatation rate, duration of first, second and third stages of labour, delivery outcome, neonatal outcome and drug adverse effects were recorded.

## Results

- The rate of cervical dilatation was 2.87cm/hr in the Buscopan® group and 0.8 cm/hr in the placebo group ( $P < 0.05$ ).
- The mean duration of the first stage in the Buscopan® group was  $222.3 \pm 82.3$  minutes while it was  $293.6 \pm 101.3$  minutes for the placebo group ( $P < 0.05$ ).
- The mean duration of the second stage was reduced in the Buscopan® group but it was not significant ( $P = 0.19$ ).
- The drug administration–delivery interval was shorter in the Buscopan® group ( $243 \pm 87$  minutes) compared to that of the placebo group ( $318.6 \pm 112.1$  minutes) ( $P < 0.05$ ).
- The mean duration of the third stage was  $4.7 \pm 1.6$  minutes compared to  $6.7 \pm 3.9$  minutes in the placebo group ( $P < 0.05$ ). There was a statistically significant increase in self limiting maternal adverse effects in the Buscopan® group.
- There was a slightly higher but statistically insignificant caesarean and instrumental delivery rate and also Oxytocin augmentation in the placebo group.
- There was no difference in the maternal pulse and systolic blood pressure, APGAR scores, neonatal outcomes and demographic characters of both groups.

## Conclusion

- Buscopan® is effective in significantly increasing the cervical dilatation rate, reducing the duration of the first and third stages of labour and also reducing the admission delivery interval
- . It may however cause mild self limiting adverse effects in the mother.