

PR210
SEVONOX STUDY: A COMPARISON OF 0.8% SEVOFLURANE & ENTONOX FOR LABOUR ANALGESIA

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Background & Objectives: Labour epidural remains the gold standard for analgesia but is rarely available in developing countries. Parenteral opioids and Entonox (nitrous oxide 50%: oxygen 50%) remain the most commonly used labour analgesics. Sevoflurane has been studied as an alternative to Entonox and found to provide better analgesia. In this study, we compared 0.8% Sevoflurane with Entonox in 50 primigravida parturients, looking at pain relief and possible side effects in an open label randomized clinical control trial.

Materials & Methods: Parturients were randomised to received either Sevoflurane or Entonox. Sevoflurane was delivered via a commercially available inhaler delivering a fixed concentration of 0.8%. Entonox was delivered using an inhaler attached to wall gas supply. All parturients were monitored hourly. Pain relief was assessed using a 100mm visual analogue scale (VAS). Sedation was assessed via the Wilson sedation score. The presence of nausea or vomiting was recorded. The need for alternative analgesia, caesarean section rate, maternal blood loss and fetal outcome were also assessed.

Results: Two parturients dropped out of the study. Of the remaining 48 parturients, 24 were randomized into each arm. As seen in Table 1, there were no significant differences in median VAS scores for Overall Pain experience, Overall Recall and Pain Scores at the first and last hour of labour between groups. There were no significant differences in adverse effects between groups although the numbers were greater on the Entonox[®] arm.

Table 1: Summary of Parameters

Parameter	Sevoflurane N=24	Entonox N=24	P Value
Median(IQR [Range])			
Overall Pain Score	4.5 (2.5-9.0 [0.0-10.0])	5.0 (2.0-9.5 [1.0-10.0])	0.908
Pain score at first hour	5.5 (4.0-7.0 [2.0-10.0])	6.0 (4.0-7.8 [0.0-10.0])	0.950
Pain score at last hour	8.0 (8.0-10.0 [2.0-10.0])	9.0 (8.0-10.0 [5.0-10.0])	0.616
Overall Recall	8.0 (7.3-10.0 [0.0-10.0])	8.5 (6.0-10.0 [4.0-10.0])	0.940
Patients(%)			
Instrumental Delivery	1.0 (4.2%)	5.0 (20.8%)	0.097
LSCS	6.0 (25.0%)	2 (8.3%)	0.121
Nausea and Vomiting	1.0 (4.2%)	4.0 (16.7%)	0.156
Epidural	None	2.0 (8.3%)	0.399

Conclusion: From our study, it can be seen that 0.8% Sevoflurane is comparable to Entonox with a similar safety profile. However, given the portability of the Sevoflurane inhaler, its use in remote areas where Entonox is unavailable or contraindicated makes it a viable alternative for labour analgesia.

References:

1. ST Yeo, A Holdcroft, SM Yentis et al. Analgesia with sevoflurane during labour; I Determination of the optimum concentration. BJA 2007;98:105-9.

2. ST Yeo, A Holdcroft, SM Yentis et al. Analgesia with sevoflurane during labour; II Sevoflurane compared with Entonox for labour analgesia. *BJA* 2007;98;110-5

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