

Paper on “Role of Transnasal Butorphanol as analgesic premedication for patients under General Anaesthesia: Comparison with intravenous Butorphanol” by Dr Amol Pradhan was published in Indian Journal of Anaesthesia.

Butorphanol is a synthetic opioid agonist antagonist used commonly to treat moderate to severe pain in the perioperative period. The newly introduced transnasal formulation represents a non-invasive presentation of the analgesic, which can be used as premedication as it can cause both analgesia and sedation in the patient scheduled for surgery. We conducted a prospective randomised case - control study to compare the duration of analgesia, level of sedation and the pain relief rendered by a single dose of Butorphanol in its intravenous and transnasal formulations.

Sixty ASA I & II patients scheduled to undergo surgery under general anaesthesia were randomly allocated to receive either transnasal Butorphanol (Group TNB received 2 puffs of 1 mg each of Butorphanol, one in each nostril) or 1 mg of Butorphanol intravenously (Group IVB) 15 minutes prior to the surgery. The sedation levels were measured using Aldrete Sedation scores every 5 minutes until the induction of anaesthesia. The respiratory rate and the oxygen saturation were also measured to assess the respiratory depression, which is commonly seen with Butorphanol. The duration of analgesia was slightly prolonged in Group TNB than Group IVB (288.83 ± 160.84 min vs. 249.6 ± 137.62 min, $p > 0.5$). Though the patients were significantly more sedated in Group IVB than TNB (Aldrete Scores at 15 min after Butorphanol were 8.9 ± 0.4 and 9.13 ± 0.51 , $p < 0.05$), the corresponding respiratory rates (12.9 ± 1.1 and 12.6 ± 0.96 in groups IVB and TNB, $p > 0.05$) and saturation levels were similar (97.7 ± 1.5 % and 97.8 ± 1.6 %, $p > 0.05$ respectively). Post operatively the Visual Analogue Score, VAS at extubation was similar 0.56 ± 1.6 vs. 0.33 ± 1.29 , $p > 0.05$ in Group IVB and TNB respectively. VAS remained comparable even when the patient demanded the rescue analgesic, 4.13 ± 0.93 vs. 4.03 ± 0.55 , $p > 0.05$ in Groups IVB and TNB respectively.

We conclude that transnasal (2 puffs) is a good noninvasive way delivering Butorphanol. It causes similar duration of analgesia and causes significantly less sedation than 1 mg of intravenous Butorphanol, though the respiratory depressant effect is comparable.