

Dexmedetomidine Combined With Fentanyl For Monitored Anesthesia Care During Endoscopic Variceal Ligation Surgery

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Objective: To investigate the ideal dosage of dexmedetomidine (DEX) with 1.0 µg/kg fentanyl for monitored anesthesia care (MAC) during endoscopic variceal ligation (EVL).

Methods: A total of 60 patients, of ASA physical status II or III, aged 36–59 yr, with body weight 50–75 kg, scheduled for elective EVL, were randomly divided into 3 groups ($n=20$): dexmedetomidine 1.0, 1.5 and 2.0 µg/kg groups (D₁, D₂ and D₃ groups). After fentanyl 1.0 µg/kg was infused intravenously, the loading dosage of DEX 1.0, 1.5, 2.0 µg/kg was separately continuous infused in 10 min. When the modified OAA / S scale ≥ 3 point, EVL was carried out. The modified OAA/S score at the time-points of before induction (T₀), before endoscope insertion (T₁) and 5mins later (T₂), end of surgery (T₃) were recorded. The operation duration, recovery time, satisfaction of patient and doctor, incidence of nausea, body movement, bradycardia, hypotension, tachycardia, hypertension and hypoxemia was recorded.

Results: There were no differences in the 3 groups about the general status, operation duration and satisfaction score ($P>0.05$). (1) Before endoscope insertion (T₁), the improved OAA / S score in Group D₃ (4.4 ± 0.2) were higher than D₁ (3.4 ± 0.5) and D₂ groups (3.8 ± 0.3) ($P<0.05$), there were no differences between D₁ and D₂ ($P>0.05$). At the time-point of 5mins later (T₂), the score in Group D₃ (4.5 ± 0.3) were higher than D₁ (3.5 ± 0.6) and D₂ groups (3.7 ± 0.4) ($P<0.05$), there were no differences between D₁ and D₂ ($P>0.05$). At the end of surgery (T₃), the score were almost similar ($P>0.05$) (2) Compared with group D₁ (3.1 ± 0.9) and D₂ (3.8 ± 0.8), group D₃ (6.6 ± 1.2) had longer recovery time (min) ($P<0.05$). (3) The satisfaction of endoscope doctor in Group D₁ (8.0 ± 0.8) was lower than group D₂ (9.4 ± 0.6) and D₃ (9.5 ± 0.5) ($P<0.05$), there were no differences during the two group ($P>0.05$). (4)

Complicatons: There were no incidence of tachycardia, hypertension and hypoxemia, no difference of hypotension incidence in the three groups ($P>0.05$). The incidences of nausea (30%) and body movement (15%) in group D₁ is significantly higher than group D₂ (5%) and D₃(0) ($P<0.05$), there were no differences between D₂ and D₃ ($P>0.05$). The incidences of bradycardia (40%) in group D₃ is significantly higher than group D₁ (0) and D₂ (10%) ($P<0.05$), there were no differences between D₁ and D₂ ($P>0.05$)

Conclusion: Combined with 1.0µg/kg fentanyl, 1.5 µg/kg DEX is more efficacy and safer for EVL in the status of monitored anesthesia care.

Key words: Endoscopic variceal ligation; Dexmedetomidine; Monitored anesthesia care