

## 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 (D<sub>1</sub>, D<sub>2</sub> and D<sub>3</sub> 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  $\geq 3$  point, EVL was carried out. The modified OAA/S score at the time-points of before induction (T<sub>0</sub>), before endoscope insertion (T<sub>1</sub>) and 5mins later (T<sub>2</sub>), end of surgery (T<sub>3</sub>) 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 (T<sub>1</sub>), the improved OAA / S score in Group D<sub>3</sub> ( $4.4\pm 0.2$ ) were higher than D<sub>1</sub> ( $3.4\pm 0.5$ ) and D<sub>2</sub> groups ( $3.8\pm 0.3$ ) ( $P<0.05$ ), there were no differences between D<sub>1</sub> and D<sub>2</sub> ( $P>0.05$ ). At the time-point of 5mins later (T<sub>2</sub>), the score in Group D<sub>3</sub> ( $4.5\pm 0.3$ ) were higher than D<sub>1</sub> ( $3.5\pm 0.6$ ) and D<sub>2</sub> groups ( $3.7\pm 0.4$ ) ( $P<0.05$ ), there were no differences between D<sub>1</sub> and D<sub>2</sub> ( $P>0.05$ ). At the end of surgery (T<sub>3</sub>), the score were almost similar ( $P>0.05$ ) (2) Compared with group D<sub>1</sub> ( $3.1\pm 0.9$ ) and D<sub>2</sub> ( $3.8\pm 0.8$ ), group D<sub>3</sub> ( $6.6\pm 1.2$ ) had longer recovery time (min) ( $P<0.05$ ). (3) The satisfaction of endoscope doctor in Group D<sub>1</sub> ( $8.0\pm 0.8$ ) was lower than group D<sub>2</sub> ( $9.4\pm 0.6$ ) and D<sub>3</sub> ( $9.5\pm 0.5$ ) ( $P<0.05$ ), 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 D<sub>1</sub> is significantly higher than group D<sub>2</sub> (5%) and D<sub>3</sub>(0) ( $P<0.05$ ), there were no differences between D<sub>2</sub> and D<sub>3</sub> ( $P>0.05$ ). The incidences of bradycardia (40%) in group D<sub>3</sub> is significantly higher than group D<sub>1</sub> (0) and D<sub>2</sub> (10%) ( $P<0.05$ ), there were no differences between D<sub>1</sub> and D<sub>2</sub> ( $P>0.05$ )

**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