The effect of transverses abdominis plane block combined with intravenous analgesia on perioperative analgesia and recovery in abdominal colorectal surgery patients

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Objective To assess the efficacy of preoperative transversus abdominis plane block(TAPB) on perioperative analgesic effect and recovery in patients with abdominal colorectal surgery.**Methods** 80 patients scheduled to undergoing abdominal colorectal surgery were randomly divided into two group (group P and group R), with 40 cases in each group, Ultrasound-guided TAP block was practiced after general anesthesia in Group R with 0.375% Ropivacaine,Capacity of 0.3 ml/kg per side, and not give processing to patients in group P , sevoflurane concentration was maintained at 0% to 2% Intraoperative.Entropy indexwere maintained 40-60 intraoperatively, and keep SPI ≤ 50,sufentanil was added 0.1ug/kg per time according to SPI .two groups were implemented PCIA after surgery . The sevoflurane usage in the traoperative and sufentanil usage in the perioperative, postoperative VAS score at five time points , adverse reactions 、ambulation and length of hospital stay and patients' satisfaction of two groups were analyzed. **Results** Compared with group P , The usage of sufentanil in traoperative and 2h、6h after surgery of Group R was significantly lower than that of group P ,the time to gastrointestinal function recovery and patients'first ambulation of Group R was in advance , and insufficient analgesia cases are lesser than Group P(p <0.05).

Conclusions Ultrasound-guided TAPB can provided safe postoperative analgesia and reduce postoperative pain in the patients with abdominal colorectal surgery , Beneficial to the rehabilitation of patients.

Table 1 General conditions and duration of surgery

Grou	n	male	female	age	Weight(kg)	duration of surgery(min)
P						
P	40	28	12	56.2±9.0	56.4±7.9	169.0±23.7
R	40	25	15	57.5±8.2	58.2±8.5	174.4±24.8

Table 3 VAS at five points after operation [M(IQR)]

Group	n	VAS				
		T1	T2	T3	T4	T5
P	40	2 (3-2)	2 (3-2)	2 (2-2)	2 (2-2)	2 (2-1)
R	40	2 (3-2)	2 (3-2)	2 (2-2)	2 (2-1)	2 (2-1)

^ap<0.05;

Table 5 Recovery of patients in both groups

atients'first nbulation(h)	the time to gastrointestinal function recover (h)	insufficient analgesia cases	the cases of additional painkillers	Length of stay	Adverse reactions associated with opioids
1.1±13.7	49.2±13.7	8	10	19.6±3.1	19
1.8±13.3 ^a	41.9±12.3 ^a	2 ^a	6	18.8±2.5	15

^ap<0.05

Table 2 Intraoperative dosage of sevoflurane and sufentanil

Group	n	Dosage of sevoflurane (ml)	Intraoperative sufentanil dosage (ug)
P	40	17.0±3.1	51.4±11.9
R	40	15.8±3.0	41.9±8.6 ^a

^ap<0.05;

Table 4 Postoperative PCIA sufentanil dosage at five points

oup	n	T1	T2	T3	T4	T5
	40	7.3±2.4	17.4±3.0	31.7±4.0	55.2±6.9	95.7±9.0
	40	3.9±2.4 ^a	13.0±3.7 ^a	29.4±6.8	53.6±9.6	93.5±11.8

^ap<0.05

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