44505 - SAME POSTOPERATIVE PAIN RELIEF WITH MORPHINE-FENTANYL AND MORPHINE

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INTRODUCTION: Small repeated doses of morphine every 5 min are recommended to relieve pain in the post anesthetic care unit (PACU)¹. However, time to peak effect of morphine is long (86 min)². A morphine-fentanyl mixture is expected to combine the rapid onset of fentanyl (time to peak effect = 6.6 min)³ with the sustained duration of morphine. This study was designed to determine if a morphine-fentanyl mixture relieves pain faster than morphine alone in the PACU.

METHODS: In a prospective, randomized, double blind study, approved by the Research Ethics Committee of our hospital, 80 patients undergoing elective surgery under general anesthesia received equipotent doses of opioids (either morphine 3 mg or morphine 1.5 mg plus fentanyl 15 µg) intravenously every 5 min for up to 1 hr in the PACU. Time to pain verbal numerical scale (VNS) score ≥ 3 , number of doses needed and side effects were recorded. Morphine consumption, VNS score and side effects were noted 1, 4 and 24 hr postoperatively. Data were expressed as median and quartile. A P value < 0.05 was considered statistically significant.

RESULTS: Sixty-eight patients completed the study. Both groups were comparable with respect to demographic data, type of surgical procedure, duration of surgery and intraoperative opioids. Both groups had similar VNS scores upon arrival in the PACU and during titration, with no difference in time, number of doses and total opioid dose to obtain VNS ≥ 3 (Table). However, episodes of bradypnea (respiratory rate (RR) < 8 min⁻¹) were significantly more frequent with morphine-fentanyl, but arterial oxygen desaturation (SatO₂ < 93%) did not occur. Incidence of nausea, pruritus and sedation was similar in both groups. Cumulative morphine consumption and VNS after 1, 4 and 24 hr were similar in both groups.

Table: Dose and time needed to obtain VNS ≤ 3 and side effects			
	Morphine Group (n = 35)	Morphine- fentanyl Group (n = 33)	P value
Time to VNS ≤ 3 (min)	45 (20, 60)	40 (20, 60)	NS
Dose (n)	8 (4, 12)	7 (4, 10)	NS
Morphine dose (mg)	24 (12, 36)	10.5 (6, 15)	-
Fentanyl dose (mcg)	0	105 (60, 150)	-
Equivalent morphine dose (mg)	24 (12, 36)	21 (12, 30)	NS
Patients with RR $< 8 \text{ min}^{-1}$	1	10	0.011
Data are expressed as median (quartile) or number. VNS = visual numerical scale; RR = respiratory rate.			

CONCLUSION: Titration using a combination of morphine 1.5 mg plus fentanyl 15 mcg is not faster than with morphine 3 mg alone to relieve pain in the PACU. It does not influence pain score, morphine consumption and side effects during the next 24 hr. However, it is associated with more frequent episodes of bradypnea.

REFERENCES: 1. Eur J Anaesthesiol 2001; 18: 159-165; 2. Anesthesiology 2000; 93: 619-628; 3. Anesthesiology 1991; 74: 34-42.