Effect of Valdecoxib on transitional pain after elective ambulatory surgery

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INTRODUCTION

Transitional pain is defined as the pain that occurs following the recession of regional anesthesia. Shoulder surgery is associated with severe pain for the first 24-48 hours. Opioid analgesics currently used to manage transitional pain can be both inadequate and have undesirable side-effects. Valdecoxib, a new COX-2 inhibitor can improve analgesia. Our objective was to evaluate the analgesic efficacy of Valdecoxib following brachial plexus block.

METHODS

Following IRB approval, 60 adults of either gender between the ages of 18-75 (ASA I-III), scheduled for elective ambulatory shoulder surgery and regional analgesia were to be randomized into two groups. Group 1 were given Valdecoxib 40 mg orally 1 hour before surgery and thereafter 40 mg 12 hourly for three days. Group 2 were given Placebo 1 hour before surgery and thereafter 12 hourly for three days.

All patients received acetaminophen 1 gm q 6 hourly for three days. Patients were provided with Oxycodone and told to take 5-10 mg 4 hourly as required. All patients were provided Dimenhydrinate for nausea and vomiting. All patients received sedation for the block (fentanyl and midazolam) and a general anesthetic for the procedure. Peri-operative doses of narcotics used were recorded. Interscalene block was performed using 40 ml of 0.5% ropivacaine with epinephrine 1:400,000.

Pain VAS scores were recorded preoperatively, postoperatively and in a patient diary once a day on a 100 mm scale. The patient also recorded time block receded, how much oxycodone was required daily, and how much gravol was used daily. The patient sent the diary back to the researchers for analysis.

RESULTS

A total of 11 patients (2F, 9M) have been randomized so far. Six were given Valdecoxib and 5 received placebo. One woman was admitted and the second did not return the diary.

Study No	Age (yrs)	ASA	M/F	VAS In PACU	Fent (Micro-gm)	Morph (mg)	Period of analg (hrs)	Oxyc-tot. (no. tabs)	Average Post-op VAS R/M	gravol
0001(V)	55	2	M	0/0	150	0	12.5	6	16/25	3
0002(P)	24	1	M	0/0	200	0	10	4	42/47.5	1
0003(P)	32	1	M	11/50	100	8	8	25	59.5/79.5	0
0004(V)	58	3	M	0/0	250	0	8	0	9.7/23	0
0006(V)	59	2	M	0/0	150	0	12.5	0	5.2/7	0
0009(V)	59	2	M	0/28	500	10	13	5	0/4	3
0010(P)	74	2	M	42/26	350	0	5.5	17	44/?	0
0011(P)	39	1	M	0/0	250	0	10	26	37.5/62.5	0
0012(V)	64	2	M	0/0	150	0	9.5	8	16/16	0

Legend: VAS, R/M= at rest/ on movement, Morph=morphine, Oxyc tot.=Total oxycodone tabs taken during whole study, VAS Average.= average of VAS scores from day 0 to day 3 postop.

The lowest pain scores occurred in patients who had Valdecoxib. The average number of oxycodone tablets taken per patient was 18 in the placebo group versus 3 in the Valdecoxib group. Both patients who did not require any oxycodone were in the Valdecoxib group.

CONCLUSION

Valdecoxib does significantly lower peri-operative use of opioids and leads to lower VAS scores for transitional pain.