26462 - MULTIMODAL PAIN MANAGEMENT FOLLOWING CABG

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INTRODUCTION:

Our community hospital recently opened a regional cardiac surgery (CS) program. Pain Management (PM) practices were based on the multimodal (MM) pain (P) guidelines developed at the Royal Columbian Hospital described by J. Reimer-Kent: non-steroidal anti-inflammatory agent (N), acetaminophen (A) and opioid (O). PM was considered effective if CS patients' P intensity (PI) scores were $\leq$ 3/10 on the Numeric Rating Scale (NRS).

Up to 86% of the post-CS patients are reported to suffer moderate to severe P at post-operative day (POD) #3 even though unrelieved P has been linked to unfavourable clinical outcomes. Our goals were to review our PM efficacy; to establish if we are using the full spectrum of our PM practices; and to determine areas for improvement.

METHODS:

After receiving patient consent, interviews were done on urgent and elective coronary artery bypass grafting (CABG) patients by one author (SRG) on POD # 1,3, and 5 (unless discharged earlier), at 48 hours after discharge, and lastly in follow-up in the surgeon's office. Multiple tools were utilized in the study: Question 1 of the Brief Pain Inventory; the Patient Outcome Questionnaire (POQ); a modified version of the Pain Management Monitoring Interview Questions (PMMIQ); a pain diary and the NRS. Our study objective is to enroll 50 patients through completion.

RESULTS:

Seventy-nine patients were approached for the study. To date, nine patients have been followed completely. All had left internal mammary artery dissection. There were no sternal wound infections. 48 hours post-discharge was the time of greatest PI (see table 1). At post-op office visit, 44% of patients reported PI scores >3 . Prior to POD#5, the majority of our patients were receiving our planned MM pain therapy. No patients were on the MM plan at POD 5 and beyond.

DISCUSSION:

Our in-hospital PI scores are better than the literature suggests; however, they deteriorated during the hospital stay. This may reflect increased activity, or the elimination of some types of analgesics. Surprisingly, our outpatient scores increased even more, and remained high on the final visit, sometimes as long as eight weeks post-operatively. Of note, the full spectrum of PM drugs was not utilized in a large percentage of the patients who continued to report pain. From POD #5 onwards, the MM plan appears to have been abandoned- no patient with unsatisfactory P was receiving the full combination of N, A, and O. Perhaps there is under-recognition, by both patients and health care providers, of the effectiveness of non-opioid medications, particularly in combination. It appears that our MM PM does not need to be eliminated, but strengthened.

PI scores may not accurately reflect satisfactory PM. Increased P may limit activities necessary for acute post-surgical recovery. This is an area that warrants further investigation to develop a better marker for inadequate PM.

Multimodal (MM) analgesic use in patients with Pain Intensity
(PI) scores > 3 or PI ≤ 3

	<i>POD 1</i>	<i>POD 3</i>	<i>POD 5</i>	<i>48 hrs</i>	<i>8 weeks</i>
N	38	42	29	18	9
#(%) pts PI >3 or pts PI ≤ 3	20(53) 18(47)	22(52) 20(48)	15(52) 14(48)	8(44) 10(56)	4(44) 5(56)
#(%)Rx MM	14(70) 11(61)	14(64) 8(40)	2(13) 3(21)		
#(%) not Rx MM:					
N only					1(25)
O only				3(38) 1(10)	1(25)
A only		1(5)	3(20) 4(29)	4(50) 5(50)	1(20)
O+A-N	5(25) 7(39)	8(36) 9(45)	10(67) 6(43)	1(12) 4(40)	1(25) 1(20)
O+N-A	1(5)				
Other		2(10)	1(7)		