

**ACUTE POST OPERATIVE ANALGESIA AFTER
CRANIOTOMY : THE ANALGESIC AND OPIOD
SPARING EFFECTS OF INTRAVENOUS
PARECOXIB**

BY

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TABLE OF CONTENTS

ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
ABSTRAK	xi
ABSTRACT	xiii
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: LITERATURE REVIEW	3
2.1 Brief anatomy	3
2.2 Pain after craniotomy	6
2.2.1 Incidence of pain after craniotomy	6
2.2.2 Pathogenesis of pain post craniotomy	8
2.2.3 Treatment of acute pain	12
2.2.3.1 Infiltration with local anaesthetics	12
2.2.3.2 Use of Paracetamol and Codeine	13

2.2.3.3	Patient control analgesia (PCA) with morphine	13
2.2.3.4	Non Steroidal anti-inflammatory Drugs (NSAIDs)	14
2.2.3.4.1	COX expression and function	18
2.2.3.4.2	Side effects of NSAIDs	24
2.2.3.4.2.1	GI toxicity	24
2.2.3.4.2.2	Hematological effects	27
2.2.3.4.2.3	Cardiorenal effect	28
2.2.3.4.2.4	Hepatic effect	30
2.2.3.4.2.5	Effect on bone and wound healing	30
2.2.3.4.2.6	Drugs interaction	32
2.2.3.4.3	Contraindications	33
2.2.3.4.4	Colorectal cancer prevention	33
2.2.3.5	Parecoxib	34
2.2.3.5.1	Postoperative opioid-sparing effect	40
2.2.3.5.2	Differentiation of Parecoxib from conventional NSAIDs.	41
2.2.3.5.2.1	Platelet function and bleeding time	41

2.2.3.5.2.2 Upper gastrointestinal effects	42
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CHAPTER 3: OBJECTIVES

3.1 General Objective	43
3.2 Specific Objectives	43
3.3 Research Hypotheses	44

CHAPTER 4 : METHODOLOGY

4.1 Study Design	45
4.2 Study Sample	45
4.3 Sample Size	46
4.4 Study Method	48
4.5 Statistical Analysis	52

CHAPTER 5 : RESULTS

5.1 Demographic characteristics	53
5.2 Visual Analogue Scale	59
5.3 Total Morphine consumption	63
5.4 Opioids side effects	67
5.5 Postoperative hematoma	67

CHAPTER 6 : DISCUSSION	70
CHAPTER 7 : CONCLUSION	75
REFERENCES	76
APPENDIX	102

LIST OF TABLES

Table	Title	Page no
Table 2.1	Features of conventional Non-steroidal Antiinflammatory Drugs	19
Table 5.1	Demographic data	54
Table 5.2	Comparison on demographic data between Parecoxib group and Morphine group	60
Table 5.3	Comparison on VAS between Parecoxib group and Morphine group	55
Table 5.4	Comparison on VAS between parecoxib group and morphine group at each time interval.	61
Table 5.5	Comparison on total demand and total delivery of Morphine between Parecoxib group and Morphine group.	64
Table 5.6	Comparison on demand of morphine between parecoxib and morphine group.	65
Table 5.7	Comparison on morphine delivery between parecoxib and morphine group.	66

Table 5.8 Comparison on opioids side effects between Parecoxib group and Morphine group.

68

LIST OF FIGURES

Figure	Title	Page no
Figure 2.1	Nerve supply to head and neck region	5
Figure 2.2	Arachadonic Acid metabolism	17
Figure 2.3	Mechanism of allodynia and hyperalgesia	36
Figure 4.1	Study flowchart	50
Figure 4.2	Time sequence for VAS assessment and administration of parecoxib or normal saline.	51
Figure 5.1	Age distribution	56
Figure 5.2	Race distribution	57
Figure 5.3	Gender distribution	58
Figure 5.4	Distribution of mean VAS for parecoxib and morphine group	62
Figure 5.5	Percentage of nausea between Parecoxib group and Morphine group.	69

ABBREVIATIONS

ACE	Angiotensin Converting Enzyme
ANCOVA	Analysis of covariance
ASA	American Society of Anaesthesiologist
CNS	Central Nervous System
COX	Cyclooxygenase
CSF	Cerebrospinal Fluid
GABA	Gamma Amino Butyric Acid
GFR	Glomerular filtration rate
GI	Gastrointestinal
IV	Intravenous
NMDA	N-Methyl D-Aspartate
NSAIDs	Non-Steroidal Antiinflammatory Drugs
OA	Osteoarthritis
PCA	Patient Controlled Analgesia
PGE2	Prostaglandin E2
VAS	Visual Analogue Scale

ABSTRAK

PENAHAN SAKIT AKUT SELEPAS PEMBEDAHAN OTAK (KRANIOTOMI) : KESAN PENJIMATAN OPIOD DAN PENAHAN SAKIT SUNTIKAN PARECOXIB.

PENGENALAN

Kesakitan akut selepas pembedahan otak sebelum ini dilaporkan sebagai diantara sederhana dan teruk. Parecoxib adalah satu-satunya ubat penghalang enzim COX-II disuntik secara intravena yang mempunyai potensi untuk merawat kesakitan akut selepas pembedahan otak. Ia boleh mengurangkan penggunaan opioid dan mengelakkan kesan sampingan ubat opioid dan juga kesan sampingan kumpulan ubat antiradang bukan steroid iaitu pendarahan selepas pembedahan.

OBJEKTIF

Tujuan utama kajian ini ialah untuk menentukan tahap keberkesanan penahan sakit dan kesan penjimatan opioid Parecoxib selepas pembedahan otak.

METODOLOGI

Kajian ini adalah berbentuk prospektif, double blinded, randomized controlled trial yang melibatkan 60 pesakit yang menjalani pembedahan otak elektif. Pesakit dibahagikan kepada dua kumpulan yang mana satu kumpulan menerima ubat Parecoxib dan UPSDP morfin (n=30) sementara satu lagi kumpulan menerima UPSDP morfin (n=30). Suntikan parecoxib 40 mg diberikan 2 jam sebelum pesakit di buang tiub pernafasan dan dos seterusnya selepas 12 jam. Kumpulan satu lagi menerima suntikan cecair salin pada sela masa yang sama. UPSDP morfin disediakan sebagai ubat penahan sakit. Tahap kesakitan mereka dinilai pada suatu sela masa

yang tetap selepas pembedahan selama 24 jam. Jumlah penggunaan morfin selama 24 jam, kesan sampingan ubat opioid dan kesan pendarahan selepas pembedahan otak juga direkodkan.

KEPUTUSAN

Terdapat perbezaan yang signifikan dari segi penilaian tahap kesakitan (PTK) diantara kumpulan parecoxib dan kumpulan morfin pada 2,4,16,dan 24 jam selepas dihentikan bantuan pernafasan. Purata PTK pada 2 jam adalah 2.2 ± 0.85 pada kumpulan parecoxib sementara 5.0 ± 0.94 pada kumpulan morfin ($p < 0.001$). Pada jam ke 4 purata PTK adalah 2.0 ± 0.66 pada kumpulan parecoxib sementara 3.3 ± 1.2 pada kumpulan morfin ($p < 0.001$). PTK pada jam ke 8 dan 12 adalah tidak menunjukkan perbezaan yang signifikan. Purata PTK pada jam ke 16 adalah 1.1 ± 0.30 pada kumpulan parecoxib sementara 1.4 ± 0.49 pada kumpulan morfin ($p < 0.05$). Pada jam ke 24 purata PTK adalah 1.0 ± 0.32 sementara 1.4 ± 0.49 pada kumpulan morfin ($p < 0.001$). Jumlah penggunaan morfin juga menunjukkan perbezaan yang signifikan iaitu $4.8 \text{ mg} \pm 2.68$ pada kumpulan parecoxib dan $9.0 \text{ mg} \pm 2.03$ pada kumpulan morfin ($p < 0.001$). Ini menunjukkan kesan penjimatan opioid sebanyak 46.6%.

KESIMPULAN

Suntikan Parecoxib memberikan ketahanan yang lebih baik terhadap kesakitan dan menjimatkan penggunaan morfin selepas pembedahan otak.

ABSTRACT

ACUTE POST OPERATIVE ANALGESIA AFTER CRANIOTOMY : THE ANALGESIC AND OPIOD SPARING EFFECT OF INTRAVENOUS PARECOXIB.

INTRODUCTION

Acute post craniotomy pain was previously reported to be between moderate to severe. Parecoxib is the only available intravenous COX II inhibitor which has great potential to treat acute post craniotomy pain. It can avoid side effects of opiod as well as avoid potential conventional NSAIDs side effect of postoperative hematoma.

OBJECTIVE

The main aim of this study is to determine analgesic efficacy and opiod sparing effect of Parecoxib for acute pain post craniotomy.

METHODOLOGY

This was prospective, double blinded, randomized controlled trial involving 60 post elective craniotomy patients. Patients were divided into two groups in which one group received parecoxib and PCA morphine (n=30) and the other group received PCA morphine (n=30). IV parecoxib 40 mg was given 2 hours prior to extubation and another dose after 12 hours. The other group was given IV normal saline at same interval. PCA morphine was prepared as rescue analgesia. Their pain intensity was assessed by Visual Analogue Scale at specific interval post operatively for 24 hours. Total morphine consumption over 24 hours, opiod side effects and post operative hematoma were also recorded.