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Research Article

**ASSESSMENT OF PAIN MANAGEMENT PRACTICE IN
RURAL GOVERNMENT HOSPITAL FOLLOWING
SURGERY****Elizabeth Phoebe Paul^{1*}, Geethu C¹, Jasmin Elizabeth Thomas¹, Chintu S Pullan¹,
Joseph Tomy¹, Menaka K², T Sivakumar³**¹Pharm D Interns, Department of Pharmacy Practice, Nandha College of Pharmacy, Erode, Tamil Nadu.²Lecturer, Department of Pharmacy Practice, Nandha College of Pharmacy, Erode, Tamil Nadu.³Principal, Department of Pharmacy Practice, Nandha College of Pharmacy, Erode, Tamil Nadu.**Abstract:**

Background: After surgery, pain is common in hospital-admitted patients and its management is determined by different therapeutic ways and also depends on the attitudes of different health professionals in various hospitals. The aim of this study is nothing but to describe the patterns of prescription for postoperative pain after surgeries and whether pain reliefs are given according to standard guidelines.

Materials and Methods: A brief data collection form with demographic details, Numerical Rating scale (NRS) to estimate pain intensity, the type of analgesics used, Pain management index (PMI), treatment adequacy and patient satisfaction were included to accomplish our aim.

Results: NSAIDs or Combination of NSAIDs are mostly used rather than opioids.

Conclusion: The study showed that most of the health practitioners of today do not practice according to the standard guidelines especially in a developing country like India.

Keywords: Pain Management, Surgery.

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INTRODUCTION:

Postoperative pain is common in inpatients and its management is an essential care component in surgical wards. It is a form of acute pain following surgery. It results from surgical procedures like skin incision, tissue dissection, manipulation and traction. Its management is executed by different pharmacological and non-pharmacological ways of treatment. It also depends on the attitudes of health professionals in each hospital. Studies have confirmed in the past decades that (20-80%) of patients who undergo a surgery whether it may be a minor or a major, suffer from pain. Pain is said to be a health problem worldwide. Regardless of this longstanding recognition of postoperative pain as a health problem, and the updated awareness and resources for treating pain, inadequately controlled pain continues to pose a significant challenge to manage patients in postoperative contexts [1]. Successful management in pain depends on both health care personnel's and patient's cooperative effort for assessing and controlling the pain. It can relieve pain and lead to earlier mobilization, shorter hospital stays, reduced hospital costs and better patient satisfaction [2]. Patient satisfaction with postoperative pain management depends on a number of variables which includes patients expectations, intensity of pain experienced, promptness of acute pain service response, effectiveness of treatment and health-care professionals attitude towards them. Health staffs who are supposed to deliver analgesia to patients on time as prescribed delay in giving due to shortage of health staff, thereby interfering the control of pain and patient recovery.[4] The main pharmacological treatment include paracetamol, nonsteroidal anti-inflammatory drugs (NSAIDs) and opioids. Combination of analgesics is required for effective pain relief in some surgery cases. Unfortunately, there is no such single agent as an ideal choice for all types of patients or no agent is appropriate for all types of pain, hence physicians choose the best, effective agent or a combination of agents, from the options accessible based on various factors which would include patient

dynamics, drug related factors, and disease related aspects. Patient satisfaction plays an important role in ensuring compliance with the treatment. Accepting physician's point of view while choosing an analgesic and significant barriers in effective pain management through a systematic approach will help to receive better outcomes [3]. The main aim of this study is:

1. To describe the prescription pattern for postoperative pain in a Government hospital.
2. To check whether the drug use is in consistence with the WHO pain management ladder.
3. To evaluate patient satisfaction through determining the pain management index.

MATERIALS AND METHODS:

This prospective observational study was conducted in the surgical wards of General Medicine and Gynaecology in a Government hospital, located in Tamil Nadu for a period of 2 months (June 6, 2016 – August 6, 2016) among 90 patients. A specifically designed concised proforma with all basic demographic details, Numerical Rating scale (NRS) to estimate pain intensity, the type of analgesics used, Pain management index (PMI), treatment adequacy, patient satisfaction were included.

The patients of the post operative wards both major and minor surgery were recruited and interviewed about the pain intensity for 3 consecutive days for which the pain management index was calculated. The NRS used is a scoring system in which (0) = no pain, (1-4) = mild pain, (5-6) = moderate pain, (7-10) = severe pain. The analgesics used are also numbered as 1= non opioids, 2= weak opioids, 3= strong opioids. Pain management is calculated from the NRS scoring and the analgesics used (analgesics - NRS). The average of PMI was used to estimate the treatment adequacy. The patient satisfaction was interviewed. The results obtained were entered in Microsoft Excel Sheet and analysed.

RESULTS:

The study comprised of 90 patients in which 56.7% were males and 39% were females. The total population were categorized based on their age group as in Table 1

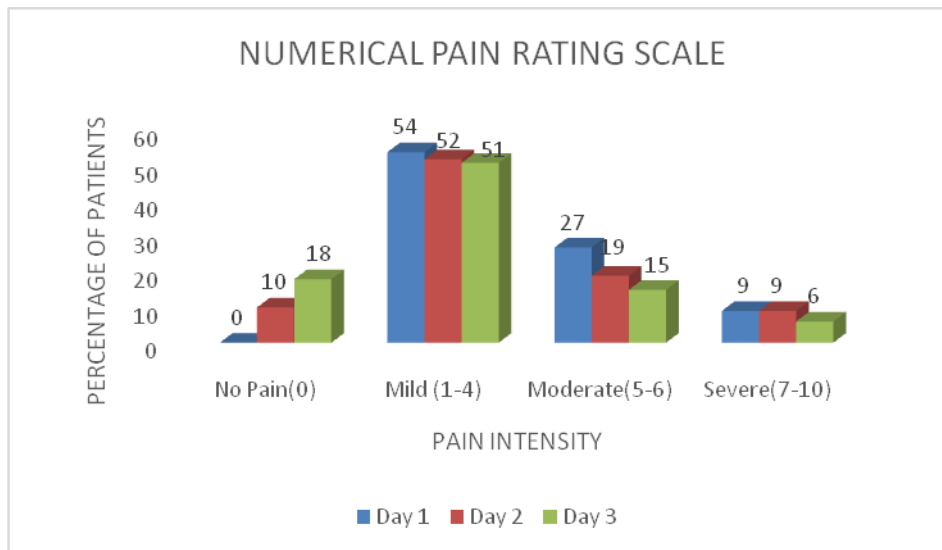
Table 1: Age Distribution of the Study Population

Age Group	Number	Percentage (%)
20-35	18	20
36-50	27	30
51-65	36	40
66-75	9	10

Table 2: Diagnosis of the Surgical Cases

Diagnosis	Number	Percentage (%)
Hernia	21	23.3
Labour cases	12	13.3
Abnormal uterine bleeding	12	13.3
Varicose vein	9	10
Cellulitis	6	6.7
Others	30	33.3

The diagnosis of the post-operative patients were also elicited and categorized as depicted in the Table 2.

**Fig 1: Pain Intensity Scale (NRS)****Table 3: Pattern of Medications Used For Pain Management**

Drugs Used	Number	Percentage (%)
Inj. Diclofenac	15	16.7
Inj. Tramadol	9	10
T. Aceclofenac + Paracetamol + Serratiopeptidase	3	3.3
T. Aceclofenac + Paracetamol	3	3.3
Inj. Diclofenac + T. Aceclofenac + Paracetamol + Serratiopeptidase	24	26.7
Inj. Diclofenac + T. Aceclofenac + Paracetamol	24	26.7
Inj. Tramadol + T. Acetaminophen	6	6.7
Inj. Tramadol + T. Aceclofenac + Paracetamol	6	6.7

The data obtained on the usage of analgesics for the post operative pain from the case sheets are summarized as given in table 3. It is clearly evident that NSAIDs or combinations of NSAIDs are commonly used.

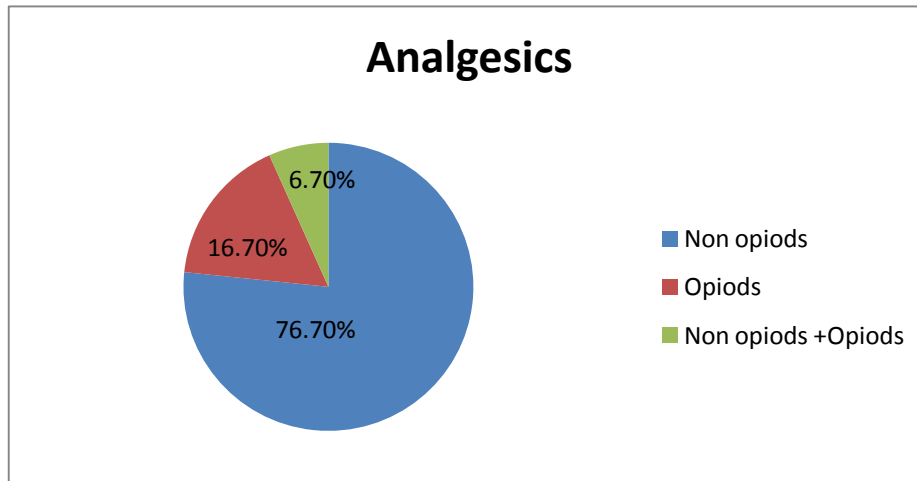


Fig 2: Pattern of Use of Analgesics

Figure 2 numerically depicts the percentage of use of opioids and non-opioids in pain management after surgery.

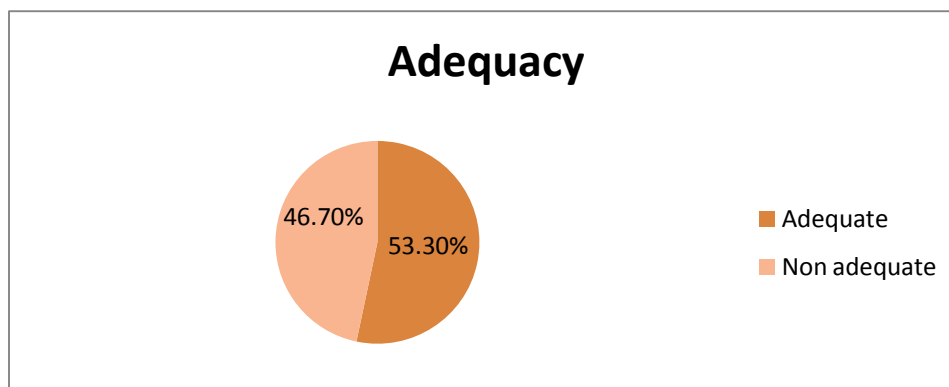


Fig 3: Treatment Adequacy

Using NRS and analgesic used, the average PMI is (negative PMI indicates inadequate treatment while positive value is adequate) which reflects the fact that whether the treatment given is adequate or not as in Figure 3

Table 4: Patient Satisfaction

Score	Number	Percentage (%)
Satisfied	36	40
Neither satisfied nor dissatisfied	30	33.3
Dissatisfied	24	26.7%

The overall patient satisfaction including the treatment given and the health professional approach were interviewed and outcome was tabulated as in Table 4.

DISCUSSION:

Post-operative pain management is done on requirement basis, that is medication and interventions are implemented based on the severity of pain.^[5] In developing countries pain management strategy is derived from the medical staff's experience and is not always consistent with standard recommendations.^[6,7,8,9] The selection of the analgesics for the pain management depends on the types of surgery(major/minor), site of incision, pain severity. The diagnosis also is important determinant of the type of surgery.

The typical pattern of the use of analgesics after surgery in a government hospital is depicted in Table 3. The results clearly show that NSAIDs were the most commonly used medication while opioids were rarely used to relieve severe pain. Gordon *et al.*, and Faponle *et al.*, states that pethidine and intramuscular injections are commonly used medications in acute care settings which is not indicated in standard guidelines^[8,10] whereas in developed countries NSAIDs and paracetamol are used.^[1,2]

The use of medications were analysed to check whether it is consistent with WHO pain management ladder. It was found that 63 patients of mild to moderate pain was given non-opioids appropriately while 27 patients who suffered severe pain were given combination of NSAIDs without opioid analgesics.

The pain intensity scores are expected to decrease on consequent days and to obtain a positive pain management index (PMI), a negative value is obtained when adequate treatment is not provided to manage pain. PMI obtained indicate inadequate treatment and thereby patient satisfaction.^[1] Based on the average PMI obtained from the individual values of 3 consecutive days, we concluded that only 53.3% received adequate treatment while 46.7% were inadequately managed. The patient satisfaction about the treatment received were also interviewed and the results obtained were tabulated as in Table 4

CONCLUSION:

The study concludes that in NSAIDs or its combinations are commonly used medication to manage pain rather than the opioids. The WHO pain relief ladder recommends non-opioids such as acetaminophen or a nonsteroidal anti-inflammatory drug (NSAID) for the initial management of pain. Acute pain characteristics and patient risk factors should be considered while choosing between acetaminophen and an NSAID.

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