

A study on pain assessment and management in post-operative patients

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ABSTRACT

Introduction: Pain is subjective in nature. It can express different manners by the patient (or) Individuals. The role of diagnostic pain procedures is considered very important. It can be classified into acute pain (i.e.; short-lived pain) and chronic pain (i.e.; pain that lasts for months). It shows the effect on the socio-economic status of the patients. Poor pain management is likely to persist until pain management practices became consistent with guidelines developed from the best available scientific evidence. **Aim:** The main aim of the present study was to find out the pain assessment importance during pain management. **Materials and Methods:** This study was a prospective observational multi-center study. **Results:** The study was conducted from July 2021 to December 2021 in various hospitals in and around the Guntur district. A total of 563 patients participated in the current study out of 290 were males and the remaining were females. At the 4-h visual analog scale (VAS) evaluated that, moderate pain was found to be 39.25% of the total population and severe pain as 19.89%. The study results were monitored and continued for 24 h. Only 5.5% of patients were consumed strong opioids during the first 24 h as postoperative analgesics. **Conclusion:** Pain assessment plays a major role in the management of chronic and acute pain. If the assessment was done we can improve the pharmaceutical care and improved socio-economic status of the patients.

Keywords: Pain assessment, pain, rational, scientific evidence, subjective

Introduction

Pain is the fifth vital sign. Pain that is assessed at regular intervals and treated with the same zeal as abnormalities in other vital signs has a much better chance of being treated effectively. The care of patients with pain is challenging and requires a systematic approach to assessment and treatment. In the past two decades, it has been seen that there is a gradual shift in focus toward pain control and pain management, independent of the cause of the pain. Pain increases morbidity and mortality.^[1,2]

The different type's scales are as follows^[3,4]

- a. Facial scale
- b. Numerical rating scale
- c. FLACC scale

- d. CRISE scale
- e. COMFORT scale
- f. Mc Gill Pain scale
- g. Color Analog scale
- h. Mankoski pain scale
- i. Brief pain inventory
- j. Visual analogue scale (VAS).

The characteristics and factors to consider a complete pain assessment are the intensity, timing, location, quality, personal meaning aggravating and alleviating factors, and pain behavior. Physiologic processes of pain including the activity of neurotransmitters are operative at multiple sites along the structural pathway to aid in conveying the signal. This process is referred to as nociception. Nociceptive process begins at the peripheral level. When damage occurs, biochemical agents that initiate or sensitize the nociceptive response are released. These agents include potassium, substance (P), bradykinin, and prostaglandin. The initial injury provokes a series of physiologic events. The sensory experience of pain depends on the interaction between the nervous system and the

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environment. There are four phases of the process of pain: (i) Transduction refer to the conversion of chemical information at the cellular level into electrical impulses that move toward the spinal cord, (ii) Transmission is the phase during which stimuli move from the peripheral nervous system toward the brain, (iii) Perception occurs when the pain threshold (the point at which sufficient pain transmitting stimuli reach the brain) is reached, (iv) Modulation is the last phase of pain impulse transmission during which the brain interacts with the spinal nerves in a downward fashion to subsequently alter the pain experience.^[5]

Materials and Methods

Study design

The study was conducted at various hospitals of the Guntur district, Andhra Pradesh, India from July 2021 to December 2021. We recorded all the patients who had undergone the various surgery. Clinical data were collected. Pain assessment and management are evaluated.

Objectives

Our primary goal is to estimate the pain assessment and management in the patients who were undergone Postoperative surgery.

Study method

This study was a prospective observational multicenter study. Patient details were obtained from the patient case sheet and required data is entered in data collection forms. The data were categorized based on various parameters such as gender, age, comorbidities, prescribed drugs, assessment of pain after surgery. Pain assessment was done using the VAS.^[6]

Inclusion criteria

- Patients age >18 years
- Who are willing to participate in the study.

Exclusion criteria

- Patients age <18 years
- Patients undergone treatment under intensive care unit
- Who are not willing to participate in the study.

Statistics

The analysis of data was done using Statistical Package for the Social Sciences software.

Results and Discussion

A total number of 563 people were involved in the study. Of 290 were male and 273 were female. The gender distribution of patients enrolled in the study was presented in Table 1.

During the study period, the data were gathered from the various hospitals in and around Guntur District, Andhra Pradesh, India. The type of surgeries and the number of patients and the percentage of

Table 1: Gender distribution

Gender	Number	Percentage
Women	273	48.4
Men	290	51.6
Total	563	

Table 2: Number of patients undergone the various kind of surgeries

Type of ward	No. of patients	%
Thoracic surgery	90	15.99
Gynecology	120	21.31
Orthopedics	150	26.64
Laryngology	20	3.55
Neurosurgery	25	4.44
Urology	28	4.97
Obstetrics	20	3.55
General surgery	98	17.41
Vascular surgery	12	2.13

Table 3: Patient pain intensity expressed using VAS after surgery

VAS (h)	Mean	moderate pain		Severe pain	
		Number	%	Number	%
4	34.07	221	39.25	112	19.89
8	32.06	187	33.21	80	14.21
12	27.05	135	23.98	66	11.72
24	25.04	117	20.78	50	8.88

VAS: Visual analog scale

Table 4: Analgesics used in postoperative pain

Name of the drug	Number
No Analgesic	38
Aspirin	2
Bupivacaine+Fentanyl	34
Diclofenac	39
Gabapentin	2
Ibuprofen	2
Ketoprofen	200
Lignocaine	4
Mefenamic acid	2
Metamizol	350
Morphine	29
Nalbuphine	2
Paracetamol	180
Tramadol	190

surgeries were summarized in Table 2. From the data, we came to know that orthopedic surgeries occupy a major share (150 out of 563) and vascular surgery was found to be limited occupancy (12 out of 563) in the list.

The pain severity was analyzed after surgery as per VAS up to 24 h with as per the following pre-fixed schedule of 4, 8, 12, 24 h. The results for pain intensity were shown in Table 3. The results were explained on the basis of VAS after surgery for Moderate and Severe pain.

The patients received various analgesics after surgery based on the need and Rationality. Some people have not received any kind of analgesics for postoperative pain conditions. The details of analgesics used for postoperative pain were enlisted in Table 4.

Conclusion

The results of the current investigation, reveal that patients face moderate or severe pain in postoperative conditions, even though there were standard treatment guidelines for effective against postoperative pain. Analgesics may be a failure to show effectiveness in some populations. The current study concludes the type of department, occupation, genetics may show an impact on the severity of pain.

The results obtained in our study are in discrepancy with recommendations presented by the national guidelines for post-operative pain management.

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