



COMPREHENSIVE CARE PROGRAM ON PAIN, FUNCTIONAL RECOVERY, NUTRITIONAL STATUS AND OCCURRENCE OF COMPLICATION AMONG PATIENT WITH HIP SURGERY

**T.VIJAYAPRIYA MSC (N)*¹, DR.A.RATHINAVEL MS.Mch, Ph.D²,
DR. MANGALAGOWRI Ph.D (N)³ AND DR.S.J.NALINI MSC (N), PH.D⁴**

¹ Ph.D Scholar, Saveetha University, Thandalam, Chennai, Tamilnadu, India - 602105

² Professor of Cardio - Thoracic surgery, Madurai Medical College, Madurai -20 India.

³ Professor & Principal Saveetha college of nursing, Saveetha University, Thandalam, Chennai India.

⁴ Professor & Vice-principal, Sri Ramachandra University, Porur, Chennai-600116, India

ABSTRACT

The aim of this study was to compare the effects of a comprehensive care program with those of usual care for the patient who undergone hip surgery. True experimental design (Two group post test only design) was selected for the study. The participants were 30 subjects with hip surgery from selected hospitals at Madurai. Based on simple random sampling method, the samples were divided into experimental and control group (15 in each group). The Comprehensive care program was given to experimental group and the routine care was given to a control group. The post test was assessed for both groups. The results found that the patient with hip surgery who receive comprehensive care program achieved good pain control, improved knowledge on functional recovery, nutrition and absence of complication than usual care group ($p < 0.05$). The study concludes that the comprehensive care program, when administered to the patient with hip surgery, has beneficial effect on post operative outcome.

KEY WORDS: Hip surgery, comprehensive care program, pain, functional recovery, nutrition, complication



*Corresponding author



T.VIJAYAPRIYA MSC (N)

Ph.D Scholar, Saveetha University, Thandalam,
Chennai, Tamilnadu, India - 602105

INTRODUCTION

The most common cause of musculoskeletal problem is injury from a traumatic event resulting in fracture, dislocations and soft tissue injuries pain, disability. The medical expense and lost wages were enormous. For all ages accidents are exceeded than other diseases¹. Falls account for problem in elderly patients, in that hip fractures are common in older adults. As the elderly population grows, the number of hip fractures continues to increase. Worldwide, the total number of hip fractures is expected to surpass 6 million by the year 2050. A total of 310,000 individuals were hospitalized with hip fractures in the United States alone in 2003. According to data from the United States Agency for Healthcare Research and Quality (AHRQ), accounting for 30 percent of all hospitalized patients². It is estimated that by 2020, almost 20% of the Indian population will be older than 60 years, and the annual incidence of hip fractures will reach 600,000. Based on current mortality data, an estimated 40% of these individuals will die within a Year because of medical complications caused by the fracture are resulting immobility. Elderly patients with hip fracture have been found to benefit from an interdisciplinary care model that generally comprises usual inpatient care with an added geriatric intervention, early rehabilitation, and supported discharge in Western countries⁴⁻⁵. This comprehensive care model included non pharmacological pain management, functional improvement, nutritional consultation, prevention of complication, fall prevention, and home care management as important elements to enhance the health condition and decrease complications of hip-fractured elders.

MATERIALS AND METHODS

Research design for this study was True experimental design (Two group post test only design). The study was conducted among patient subjected to hip surgery who admitted in orthopedic unit at MIOT Hospital and Devadoss Multi Specialty hospital, Madurai after institutional ethical committee approval. The total sample consists of 30 samples who have undergone hip surgery. Based on simple random sampling method, the samples were divided into experimental and control group (15

in each group). The inclusion criteria for samples were the age between 60 to 80 years admitted to the hospital after a fall incident, single side Hip fracture (Extra capsular fracture,) receiving Open reduction and internal fixation⁶. The tools used for the study as follows: section I- Demographic variables; SECTION II- Numerical pain scale, Harris hip score,⁷ structured questionnaire for nutritional assessment⁸⁻⁹ and Observation check list for complication. The components of comprehensive care program are video teaching, re demonstration, home care management and fall prevention. Video teaching which includes an over view of hip surgery¹⁰, progressive muscle relaxation exercise to relive pain¹¹, Exercise-to improve functional recovery¹², Diet¹⁰⁻¹³, complication¹⁰ and its prevention. Every week 8 subjects who satisfied inclusion criteria were selected and randomly assigned 4 subjects each for experimental and control group. The experimental group alone received video teaching for 30 minutes and their demonstration of Progressive muscle relaxation and exercise for hip were done from second postoperative day to till discharge. The post test-1 was assessed on 5th day for both the groups. The reinforcement video and home care management and fall prevention was given to experimental group. The post test-2nd and 3rd assessment was done 6 weeks and 12 weeks after surgery for both groups.

RESULTS

During the period of this study, Data were collected from 30 Subjects. Among them, 66.7% were in male 33.3% were in female. The result of the study revealed that there was a significant improvement in experimental group than the control group i.e., when comparing post test values of experiment group and control group, the z value was 5.047 & 4.687 at $p < 0.001$ level of significance for pain and functional recovery respectively. It also found that there was no difference in the post test value in nutritional status and complications among experiment group and control group (z value 2.003, 1.795 respectively at $p < 0.05$). The negative correlation was found between Pain and functional recovery in experimental group (-0.662).

DISCUSSION

The results of this study fill the gap in the literature by showing that adding pain management, regular exercises, nutrition consultation, prevention of complication, and fall prevention to geriatric hip-fracture programs and early-support discharge programs, which have documented positive outcome. This study also expands the results of researchers' previous studies¹⁴⁻¹⁵ by adding nutrition consultation, depression management, and fall-prevention components to an interdisciplinary care model for elders with hip fracture. The present study findings revealed that the comparison between the two groups on post operative pain score was statistically significant ($p < 0.001$) The similar findings¹⁶ were supported by a study conducted by Seers and

Carroll (1998) demonstrated that postoperative pain was reduced by relaxation exercises. Aslan (1998) observed that postoperative pain scores were lower in patients trained in relaxation exercises during the preoperative period. Good et al. (2001a) and Friesner, Curry, and Modde man (2006) demonstrated that the pain levels in patients using both analgesics and relaxation exercises were lower than in those who used analgesics alone. Relaxation exercises reduce analgesic usage by increasing the comfort of the patient, although it is recommended that they be used along with analgesics for effective pain control (Cheung et al., 2001, Good et al., 2005).³ A surgical site infection is the second most common cause of nosocomial infection after urinary tract infection and cause approximately 17% of all hospital-acquired infections.¹⁷

Table I
Comparison of Area wise distribution of control post test -3 and experimental post test -3

Domain	Control post test-3		Experimental Post test-3		z-value	P-value
	Median	IQR (Q ₃ -Q ₁)	Median	IQR (Q ₃ -Q ₁)		
Pain	2	2-1	0	0-0	5.047	0.000***
Harris HIP score	72.6	72.6-70.6	88	90-84	4.687	0.000***
Mini Nutritional assessment	24	25-24	25	26-24	2.003	0.0452
Complication	0	0-0	0	0-0	1.795	0.0726

#-Mann Whitney u test (*- $P < 0.05$ significant, **- $p < 0.01$ and $p < 0.001$ highly significant)

Figure I
Level of pain among study groups

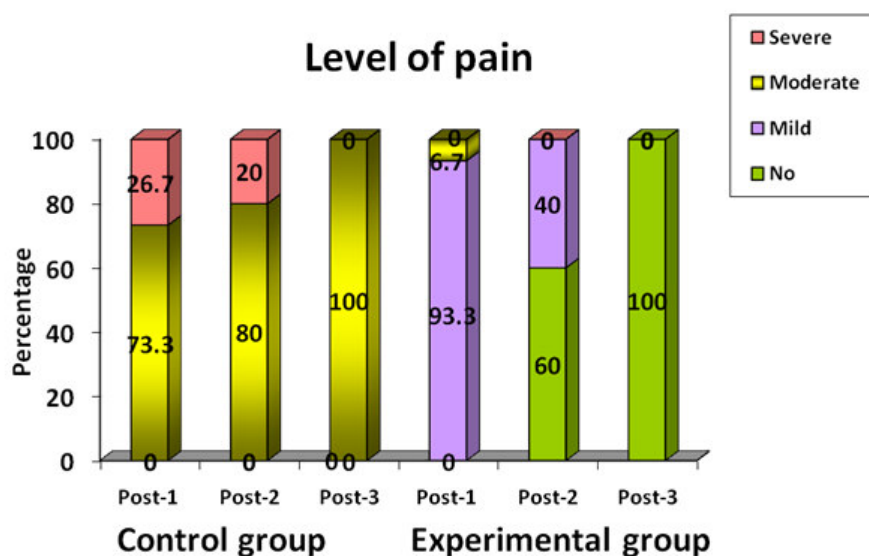
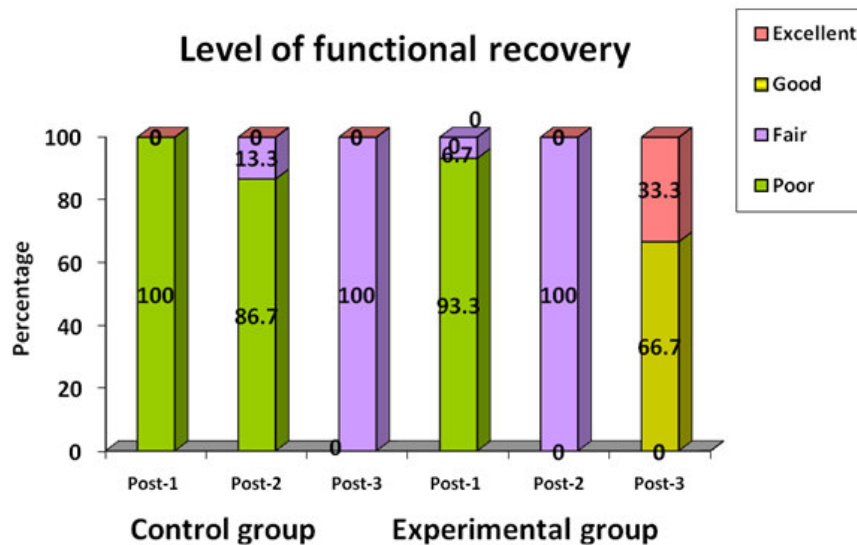


Figure II
Level of functional recovery among study groups



CONCLUSION

Hip fracture is a serious injury and requires immediate medical attention. From the result we conclude that the comprehensive care program was found to benefit for the patients with hip surgery. Therefore the comprehensive care program is needed to be administered to the patient with hip surgery in order to reduce pain, improve the functional recovery and promote the knowledge about nutritional status and prevention of complication.

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CONFLICT OF INTEREST

Conflict of interest declared none.

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