Original Research Paper

Nursing

POSTOPERATIVE OUTCOME AMONG PATIENTS UNDERGONE CORONARY ARTERY BYPASS GRAFT SURGERY

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ABSTRACT The present study investigated the postoperative outcome among patients undergone coronary artery bypass graft surgery, admitted in Govt. Medical College Hospital, Kottayam. A quantitative research approach and non experimental descriptive survey design was used for the study. The objective of study was to assess the postoperative outcome among patients undergone coronary artery bypass graft surgery. A total of 100 patients, admitted in the cardiothoracic wards were selected for the study by using non probability purposive sampling technique. The data collection instruments for the study included, sociopersonal and clinical data sheet for collecting basic information and postoperative outcome data sheet. The data was analyzed using descriptive and inferential statistics. Results showed that 64% of patients had good physiological parameters, 52% of patients had average functional status and 27% had respiratory complications.

KEYWORDS : Postoperative outcome and patients undergone Coronary Artery Bypass Graft Surgery.

Introduction:

The goal of coronary artery bypass grafting (CABG) is complete revascularization of the area of the myocardium that is perfused by coronary arteries with luminal stenosis of more than 50%. CABG surgery accounted for most of the frequent causes for hospital readmission. Presently the annual number of CABG in India is more than 60,000 according to industry sources. Coronary artery bypass surgery remains an established form of treatment for coronary artery disease, and the majority of coronary surgical procedures are performed for multiple vessel disease. Overall, the mortality rate of coronary artery surgery is low, at around 2% to 3%, although this benefit is offset by a complication rate of 20%–30%. Furthermore, post-surgical neurocognitive impairment is of concern .

Methodology:

The setting of the study was cardiothoracic wards of Government Medical college Kottayam, a total of 100 patients who had undergone CABG were taken by non probability purposive sampling technique. A non experimental descriptive survey design was used for the study. The socio personal data sheet include age, gender, education, marital status and occupation. The clinical data sheet include personal habits after diagnosis, co-morbidities, body mass index (BMI) calculated by using the formula, BMI, duration of coronary artery disease, angiogram diagnosis, graft used, wound status, total count of WBC and duration of hospital stay. The postoperative outcome was measured in terms of physiological parameters, functional status and complications. The physiological parameters were assessed by the investigator on the fourth day of surgery with the help of cardiac monitoring and clinical records and it includes 5 items such as blood pressure (BP), heart rate, respiratory rate, central venous pressure(CVP) and SpO_2.

The functional status was assessed by the investigator by using rating scale for functional status from the day of surgery to the day of discharge and it contains 9 items such as ambulation to bed side chair, oral feeding, patient reached normal bowel function, patient passed urine after removal of catheter, total ICU stay of the patient, ability in doing shoulder exercise, need for suctioning, exercise tolerance after 6 min walk test and self care activities. The complications were assessed by the investigator by using checklist for complications from the day of surgery to the day of discharge and by reviewing clinical records.

Data were organized, tabulated and analyzed using descriptive and inferential statistics with statistical package for social science (SPSS) 22 [nd] version. Analysis of sample characteristics such as socio personal and clinical data were done using frequency distribution and percentage. Postoperative outcome was analyzed by using frequency distribution and percentage.

Results:

- With regard to physiological parameters, 64% of patients had good physiological parameters, 27% had average physiological parameters and 9% had poor physiological parameters. While considering functional status, 52% of patients had average functional status and 37% of patients had good functional status. Regarding complications, 28% of patients had fluid and electrolytes related complications 26% of patients had cardiac complications, 27% had respiratory complications, 20% had surgical site complications, 17 % had gastrointestinal complications, 17% had renal complications 2% of patients had neurological complications and 44% of patients had other complications such as reintubation, reexploration, tracheostomy, ICU psychosis, hypoglycemia, hyperglycemia, prolonged inotropic support and nosocomial infections.

Table 1: Frequency distribution and percentage of patients undergone coronary artery bypass graft surgery based on physiological parameters (n=100)

Physiological parameters	f	%
Good(1-5)	64	64
Average(6-10)	27	27
Poor(11-15)	9	9

From the table 1, it is evident that 64% of patients had good physiological parameters, 27% had average physiological parameters and 9% had poor physiological parameters.

Table 2: Frequency distribution and percentage of patients undergone coronary artery bypass graft surgery based on functional status (n=100)

Functional status	f	%
Good (1-9)	37	37
Average (10-18)	52	52
Poor (19-27)	11	11

Table 2 shows that 52% of patients had average functional status, 37% of patients had good functional status and 11% had poor functional status.

Table 3: Frequency distribution and percentage of patients undergone coronary artery bypass graft surgery based on complications (n=100)

Complications	f	%
Cardiac	26	26
Respiratory	27	27
Fluid and electrolytes	28	28

Neurological	2	2
Renal	17	17
Surgical site	20	20
Gastrointestinal	17	17
Others	44	44

From the table 3, it is evident that 28% of patients had fluid and electrolytes related complications, 27% of patients had respiratory complications, 26% had cardiac complications, 20% had surgical site complications, 17% had gastrointestinal complications, 44% had other complications, 17% had renal complications and 2% had neurological complications.

Discussion:

The objective of the study was to assess the postoperative outcome among patients undergone coronary artery bypass graft surgery. In the present study postoperative outcome was assessed in terms of physiological parameters, functional status and complications. With regard to physiological parameters, 64% of patients had good physiological parameters, 27% had average physiological parameters and 9% had poor physiological parameters. While considering blood pressure, 82% of patients had normal blood pressure. The study findings were consistent with a study to examine the ambulatory blood pressure profile and its short and long term variability (daytime, night-time and 24 hours) 1, 6 and 14 weeks after CABG. While considering functional status, 52% of patients had average functional status, 37% of patients had good functional status and 11% had poor functional status. The results were congruent with a prospective cohort study to assess changes in the functional capacity of patients undergoing CABG through the six-minute walk test (6MWT) in a 2year follow-up in Hospital Clínicas Porto Alegre and Santa Casa Misericórdia Porto Alegre in Brazil. With regard to the postoperative complications the results were consistent with a prospective study to assess the prevalence of post operative symptoms, clinical manifestations and complications among patients undergone CABG.

Conclusion:

CABG is one of the major heart surgery, it leads to many complications both immediate post operative period and late period. The following conclusions were drawn based on the findings of the study. With regard to physiological parameters, 64% of patients had good physiological parameters, while considering functional status, 52% of patients had average functional status. With regard to complications, 27% of patients had respiratory complications, 26% of patients had cardiac complications, 28% had fluid and electrolytes related complications, 20% had surgical site complications, 17% had gastrointestinal complications, 17% had renal complications 2% of patients had neurological complications and 44% had other complications such as reintubation, reexploration, tracheostomy, ICU psychosis, hypoglycemia, hyperglycemia, prolonged inotropic support and nosocomial infections.

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