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Research Article

Analysis of the Impact of Integrated Anesthesia Care Management Combined with Comfort Care on Resuscitation after Artificial Knee Arthroplasty

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Abstract

Objective: to analyze the impact of anesthesia nursing integration management combined with comfort care on resuscitation after artificial knee arthroplasty. **Methods:** Seven patients admitted to our hospital in September 2021 who underwent artificial knee arthroplasty were selected as research samples to analyze the application value of anesthesia-integrated nursing management combined with comfort care. **Results:** The quality of patients' awakening from anesthesia after artificial knee arthroplasty was good; the comfort score and SF-36 quality of life score were higher than those before nursing care, and the pain score, burden score, anxiety, and depression score were lower than those before nursing care ($P < 0.05$); **Conclusion:** Anesthesia integrated nursing management combined with comfort nursing is effective in improving resuscitation after artificial knee arthroplasty.

Keywords: Integrated Anesthesia Care Management; Comfort Care; Artificial Knee Arthroplasty; Resuscitation Effect.

Artificial knee replacement is a surgical intervention for severe knee disorders that has been proven to significantly improve the impact of the pathology and enhance the quality of life of patients. The procedure realizes the medical value of relieving physical pain and restoring joint function by replacing the damaged knee joint. The success of the surgery not only depends on the surgery itself, but the postoperative recovery process is equally crucial. Therefore, nursing management in the surgical stage is closely related to postoperative recovery efficiency and rehabilitation, and the postoperative comfort of patients is enhanced through optimized postoperative nursing strategies and well-designed nursing measures to accelerate the postoperative recovery process of patients [1-2]. In this study, we analyzed the value of anesthesia care integration management and comfort care for seven patients admitted to our hospital in September 2021 who underwent artificial knee arthroplasty, as described below.

Clinical Information

Seven patients admitted to our hospital in September 2021 who underwent artificial knee arthroplasty were selected as the research sample, the maximum age was 80 years old, the minimum age was 59 years old, and the median age was 68.43±9.204 years old; of the seven patients, the anesthesia mode chosen was general intubation anesthesia in six patients and neuraxial anesthesia in one patient.

Inclusion Criteria: patients who met the treatment requirements for artificial knee arthroplasty; those with complete general information and good surgical compliance; and those whose preoperative anesthesia was general intubation anesthesia or neuraxial blockade.

Exclusion Criteria: those who withdrew from the study in the middle of the study; those with coexisting neurological and cognitive dysfunction; and those with incomplete basic data.

Methods

All patients receive integrated anesthesia care management combined with comfort care interventions during the surgical stage. In the integrated anesthesia management program, the management team is first formulated to facilitate the effective implementation of the subsequent management measures. **(1) Management program formulation:** the implementation process is formulated, and the content of the process is carried out throughout the entire process, including preoperative comprehensive assessment, intraoperative close monitoring, postoperative awakening care, postoperative recovery guidance, and postoperative tracking and management. In the preoperative stage, it is necessary to carry out in-depth communication with patients to understand their health background, psychological status, and special needs, customize personalized care plans in line with the actual situation of patients, and follow the patient-centered care model, which can effectively enhance the patient's therapeutic experience and satisfaction with care. **(2) Formulation of anesthesia care sheet**: accurately record the state of the patient in the anesthesia resuscitation room, formulate detailed anesthesia resuscitation indications, and strictly check the relevant indications during the resuscitation stage of the patient, the nursing staff and the anesthesiologist check the relevant indications, and after signing to confirm that the patient's state is good during the resuscitation stage after the patient is free of any errors, and then the patient is transferred to the ward.

Comfort Care: **(1) Condition monitoring**: through the use of monitoring equipment, the nursing staff can monitor the patient's vital signs in real-time and understand the real-time feedback of key indicators such as heart rate, blood pressure, oxygen saturation, etc., to ensure that they can quickly respond to any abnormalities during the surgical process and adjust the nursing strategy promptly to protect the patient's safety. **(2) Pain care**: after the failure of postoperative anesthesia, patients will have a certain degree of physiological pain, the need for targeted nursing interventions to enhance patient comfort, can be used in the form of ice packs, so that the ice packs and the knee joints around the full contact, the play of ice analgesia, enhance the comfort of the effect. **(3) Health education:** Through systematic education, patients can understand more comprehensively the whole process of surgery, the necessity of postoperative recovery, and how to effectively cooperate with nursing care, and encourage patients to actively participate in their care process, which can improve the actual effect of nursing care, but also enhance the patient's self-management ability.

Observation indexes: clarify the quality of anesthesia awakening, including choking response score, irritable pain score, mean arterial pressure, and heart rate index data in the stage of 10 minutes of extubation. Complete the comparative analysis of comfort (0-10 points,) and pain score (0-10 points) before and after care. Complete a comparison of patient burden score (0-50 points) evaluation scores before and aftercare. Complete a comparison of patient SAS (anxiety) and SDS (depression) scores before and aftercare. Complete the SF-36 quality of life scores of patients before and aftercare, all eight scores are 0-100, and the scores are positively correlated with quality of life.

Data processing software: SPSS 25.0; measurement data, count data data data format unified as [$\bar{x} \pm s$, (n, %)], by T value, X^2 value to complete the data calibration, the existence of statistical significance expressed as $P < 0.05$.

In The End

Quality Of Awakening from Anesthesia

Based on the development of integrated anesthesia care management combined with comfort care measures, the relevant anesthesia awakening indexes of 7 patients were analyzed, and after 10 min of extubation, the choking reaction score of 7 patients was 0.57±0.29, and the irritability and pain score was 0.66±0.08; the average arterial pressure of 7 patients during the period of peri-extubation was 107.44±1.13 mmHg, and the heart rate index was 90.43±1.78 beats/min.

Comparison Of Comfort and Pain Scores

After the development of the joint care management model, the patients' comfort scores were higher than before care, and the pain scores were lower than before care, with a large difference in data ($P < 0.05$), as shown in Table 1.

Groups	Number of examples	Comfort	Soreness
Pre-Nursing	7	6.14±1.95	7.14±0.69
Aftercare	7	8.43±0.98	5.14±0.90
T	-	2,776	4.666
P	-	0	0

Table 1: Comparison of comfort and pain scores ($\bar{x} \pm s$, points).

Analysis of Burden Score Evaluation

After the implementation of the joint care management model, the patient burden score was lower than before care, with a large difference in the data ($P < 0.05$), as shown in Table 2.

Groups	Number Of Examples	Physical Burden	Emotional Burden	Economic Burden	Totals
Pre-Nursing	7	18.14±1.77	14.29±1.80	4.14±0.69	37.14±2.11
Aftercare	7	15.14±2.11	12.14±1.07	2.14±0.69	33.85±1.34
T	-	3.88	3.71	5.42	3.48
P	-	0.0138	0.0187	0.0002	0.0045

Table 2: Burden Score Evaluation Analysis ($\bar{x} \pm s$, points).

Emotional State Scores

The anxiety scores and depression scores of the patients were lower than those of the patients before the care, and the difference in the data was large ($P < 0.05$), as shown in Table 3.

Groups	Number Of Examples	Anxiety (Sas)	Depression (SDS)
Pre-Nursing	7	52.86±2.12	54.14±1.95
Aftercare	7	46.29±2.06	49.57±2.23
T	-	5.8804	4.0816
P	-	0.001	0.002

Table 3: Mood state scores ($\bar{x} \pm s$, points).

SF-36 Quality of Life Evaluation Analysis

All eight SF-36 quality of life evaluation scores were higher aftercare than before care, with a large difference in data ($P < 0.05$), as shown in Table 4.

Sports Event	Before care (n=7)	After care (n=7)	T	P
Physiology	84.43±1.51	90.14±3.98	3.55	0
Physiological Function	83.14±2.16	93.29±1.98	9.16	0
Pain In the Body	84.71±2.56	93.86±3.29	5.80	0
Health Status	83.29±2.69	93.71±1.97	8.27	0
Energetic State	83.14±2.41	93.71±2.36	8.29	0
Social Function	83.71±3.04	93.85±1.95	7.42	0
Emotional Function	82.59±1.70	94.44±2.26	11.06	0
Mental Health	82.43±1.62	94.43±1.62	13.86	0

Table 4: SF-36 Quality of Life Rating Analysis ($\bar{x} \pm s$, points).

Discussion

The integrated management of anesthesia care is achieved through the deep integration of the dual resources of anesthesia and nursing care in order to achieve the goal of optimizing the patient's postoperative recovery process. The essence of the management phase lies in the ability to reduce the impact of adverse postoperative factors, improve overall satisfaction, shorten the patient's hospitalization period, and fundamentally improve the overall quality of healthcare services. Integrated anesthesia care management emphasizes preventive care, reducing potential risks through anticipatory measures to ensure that patients can recover in a safer and more comfortable environment [3].

Integrated anesthesia care management involves a comprehensive preoperative assessment of the patient and the development of an individualized anesthesia and care plan to reduce surgical risks and postoperative complications. Comfort care focuses on providing a warm and quiet recovery environment, helping patients relieve postoperative discomfort, and increasing their confidence in recovery through pain management and psychological support. Through the implementation of integrated anesthesia care management combined with comfort care, patients are provided with more comprehensive and efficient nursing services, thus ensuring that they can successfully pass the postoperative recovery period, recover their physiological state as soon as possible, and return to their families and society [4,5].

The results of this research can be seen: based on the development of anesthesia care integration management combined with comfort care measures, the analysis of the relevant anesthesia awakening indexes of 7 patients, after 10min of extubation, the choking reaction score of the 7 patients was 1.29±0.49, and the score of annoyance and pain was 0.57±0.29; the average arterial pressure of the peri-extubation period of the 7 patients was 107.44±1.13mmHg, and heart rate index was 90.43±1.78 beats/min; after the development of joint nursing management mode, the patients' comfort score was higher than before nursing, and the pain score was lower than before nursing, with a large difference in the data ($P<0.05$); after the development of joint nursing management mode, the patients' burden score was lower than before nursing, with a large difference in the data ($P<0.05$); after nursing, the patients' anxiety score and depression score were lower than before nursing, with a large difference in the data ($P<0.05$); the patients' anxiety score and depression score were lower than before nursing, with a large difference in the data ($P<0.05$) After the nursing care, the patients' anxiety score and depression score are lower than before nursing care, and the data difference is large ($P < 0.05$); after the nursing care, the scores of SF-36 eight quality of life evaluation are higher than before nursing care, and the data difference is large ($P < 0.05$); analyzing the relevant reasons, it can be seen that: (1) the development of anesthesia and nursing care integrated management combined with comfort care measures is of significant significance in promoting the improvement of anesthesia recovery quality, optimizing the evaluation items of the anesthesia awakening phase, and better promoting the improvement of physiological indexes of patients during anesthesia waking phase.

The physiological indexes of patients during the anesthesia awakening stage were improved. (2) The results of the improvement of comfort scores and the reduction of pain scores after nursing care indicate that the nursing management model is effective in stabilizing physiological status, reducing pain, and promoting the improvement of physiological comfort [6,7]. (3) In the analysis of the results of the evaluation of the patient burden score, the analysis of the correlation factors for the reduction of the patient burden score after nursing care, the implementation of missionary measures has led to the reduction of the patient's mental stress and the enhancement of the effect of the recovery of physiological functions after surgery, which promotes the reduction of the overall burden of pressure and is conducive to the recovery of the physical and mental state after surgery. (4) In the analysis of the reduction of patient's bad mood scores after nursing management, thanks to the implementation of comfort nursing and integrated management, the patients' physical and mental state comfortability is improved, which better promotes the effective alleviation of patients' bad mood [8].

In summary, during the intervention phase of artificial knee arthroplasty, the use of a combined intervention program of integrated anesthesia care management combined with comfort care measures optimized the quality of patients' awakening from anesthesia, while the patients' comfort state was effectively enhanced aftercare, physiological pain was reduced, adverse emotions were effectively optimized, and prognostic quality of life scores were improved, comprehensively promoting the improvement and optimization of the overall quality of the postoperative period.

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