
Nursing Care in Hip and Knee Arthroplasty in Day Surgery

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Abstract

Background. Arthroplasty is a surgical procedure that has been shown extremely effective in reducing pain, improving joint function and overall quality of life. As a result, arthroplasty is steadily increasing as a procedure, especially in the hip and knee, thereby placing a financial burden on the healthcare system. It is believed that performing hip and knee replacements in day surgery should decrease public health costs.

Aim. The aim of the research is to determine the current knowledge and doubts arising from the literature published so far regarding the performance of hip and knee arthroplasty in day surgery, perioperative nursing care, as well as detecting possible potential perioperative complications.

Methods. The research of literature was conducted through the electronic databases, Medline via Pub Med (PMC), from March 3, 1992, till December 30, 2021. Key words used in the literature search are arthroplasty, replacement, hip, knee, adverse effects, ambulatory surgical procedures, nursing. Total of 22 papers was analyzed.

Results. A clinical algorithm is suggested to accelerate recovery as a possible solution to complications of arthroplasty in outpatient procedures. These algorithms reduce the cost of treatment and the risk of complications. In addition to the aforementioned benefits, perioperative outcomes and patient satisfaction are also improved, enabling recovery in the comfort of one's own home, which is especially important for the successful rehabilitation of elderly patients. Nurses should develop empathy for patients,

respecting their individuality and right to participate in treatment. Patients expect professionalism and trust from nurses and have specific expectations of nursing care.

Conclusion. Minimally invasive arthroplasty results in less trauma, less blood loss, less postoperative pain, painful surgical reactions, and improved hip mobility. The development of surgery and anesthesia in ambulatory surgery requires nurses to play a particularly important role in postoperative recovery.

Introduction

The number of patients undergoing total hip/knee replacement is increasing due to medicine development and increasing life expectancy. The rapid increase in patient numbers and the development of new surgical techniques, precision tools, and methods has put some pressure on surgeons and medical professionals with the goal of expediting early patient recovery and reducing operating time in the hospital (1).

Hip replacement is a surgical procedure in which the hip joint is replaced with an artificial prosthesis. It is an orthopedic surgical procedure in which the head and neck of the femur are surgically removed, and the acetabular cartilage and subchondral bone are removed. After resection, the hip prosthesis is implanted in an artificial canal located in the medullary region of the proximal femur. In 70% of cases, the primary reason for arthroplasty is osteoarthritis, as it causes severe pain and prevents daily activities. In addition to osteoarthritis, conditions leading to arthroplasty include hip dysplasia, Paget's disease, trauma, and osteonecrosis of the femoral head (2). Minimally invasive hip arthroplasty is defined as a procedure for installing a total or partial hip endoprosthesis, through a significantly smaller skin incision than the classic method and with minimal soft tissue trauma. Minimally invasive techniques require great skill and experience of the surgeon and complex, sophisticated instruments. Smaller instruments and prostheses allow a smaller surgical incision. Minimally invasive arthroplasty is responsible for reduced traumatization of tissues, reduced blood loss, less

postoperative pain, reduced surgical stress response, and is responsible for increased mobility of the hip joint (3,4).

Knee arthroplasty is a surgical procedure in which the knee joint is replaced with a prosthesis. The function of a healthy knee joint is to connect the lower leg bones with the upper leg bones. The surface where these bones meet becomes worn over time. Arthritis is often the cause of detrition, but there can be other reasons that cause joint pain and swelling. The most common reason for arthroplasty is the inability of other methods to eliminate permanent pain and other accompanying symptoms associated with arthritis. Arthroplasty aims to reduce the pain, increase the quality of life, and maintain or improve knee function. The procedure is performed in different age groups (5). Knee arthroplasty can be performed using partial and total endoprosthesis. Changes in the knee are the result of mechanical and biological factors. The knee joint consists of 3 parts that can be replaced by an endoprosthesis. These are medial, lateral, and patellofemoral.

The majority of patients that undergo an implantation of a knee endoprosthesis is indicated to have degenerative changes in two or more compartments, so for them the best choice is a total endoprosthesis. Only a small number has only one section affected, and it is more often the medial part of the knee that is damaged, therefore a partial endoprosthesis can be used. Total knee arthroplasty replaces all three sections of the knee joint, medial, lateral, and patellofemoral (5). Minimally invasive knee arthroplasty is a surgical method that is quite similar to the traditional method. The difference is that with minimally invasive surgery, there is significantly less destruction of the tissue surrounding the knee. The artificial implants used in the minimally invasive method are the same as those used in the traditional method. However, the instruments used in the minimally invasive method are specially designed and, therefore enable the preparation of the femur and tibia for the acceptance of implants with sparing traumatization of the bones and tissues (6).

Thanks to the accelerated recovery algorithm, postoperative recovery is accelerated, and morbidity, treatment and hospital days are reduced. The development of the algorithm is based on the analysis of the various components responsible for the accelerated recovery. These components include optimizing comorbidities and educating the patient and every-

one involved in the course of treatment and care, anesthesia and analgesia techniques, surgical techniques, postoperative pain management, and immediate and post-rehabilitation techniques during the recovery phase (7). Premedication was administered following a preoperative patient interview, document review, and physical examination. Premedication includes medications given before anesthesia, most commonly sedatives for sedation, pain relievers, antibiotics for prophylactic purposes, antiemetics, some medications that the patient takes on a regular basis, and others necessary to safely administer the anesthesia.

With the development of medicine, society has become more and more aware of the status of nurses and their role in the surgical care of patients. After being discharged the same day (in Europe) or 24 hours later (in the US), patients continued treatment in their own home. The treatment performed is under the supervision and responsibility of a nurse (8). The job of a nurse requires an increased level of skill and knowledge due to possible complications associated with total joint replacement surgery and anesthesia. The most common postoperative complications of total joint arthroplasty are deep vein thrombosis, pulmonary embolism, postoperative wound infection, bleeding, pain, endoprosthesis dislocation, and respiratory complications. During the home visit, the caregiver must identify all possible complications and make the right decision about continuing treatment.

The aim of this study was to determine the current state of knowledge and concerns emerging from the literature published to date on the perioperative care of patients undergoing total and partial hip and knee replacements in day surgery, and to show nurse's role in patient care during and after knee arthroplasty.

Methods

Reviews and clinical studies, i.e., complete articles, were used to prepare this article. Inclusion criteria were papers enrolling patients with hip trauma or chronic degenerative disease of the hip or knee, or patients with indications for hip or knee replacement. Exclusive criteria were work performed on the

pediatric population. Selected articles are written in English. The literature search covers the period from March 3, 1992, to December 30, 2021. The Medline database was searched through the PubMed interface. The following was used for the search: "Arthroplasty, Replacement, Hip/adverse effects"[Mesh] OR "Arthroplasty, Replacement, Hip/nursing"[Mesh]) OR ("Arthroplasty, Replacement, Knee/adverse effects"[Mesh] OR "Arthroplasty, Replacement, Knee/nursing"[Mesh])) AND ("Ambulatory Surgical Procedures"[Mesh]). A total of 51 items were found. After reading the abstracts of the selected papers in detail, 22 papers were selected for further analysis.

Results

Selection of patients eligible for one-day partial or total knee and hip arthroplasty is the most important factor with a critical impact on potential perioperative complications (9). Serious complications often occur within 24 hours of surgery, so identifying high-risk candidates is especially important to maintain patient safety and reduce the likelihood of readmission to a medical facility (10). In day surgery, it is extremely important to consider the complex interdependence of certain factors influencing patient selection for hip and knee arthroplasty. There are many factors to consider that are critical to the success of the surgical procedure. These factors are related to anesthesia technique, patient characteristics, and various social factors. The presence of concomitant diseases is also extremely important in selecting suitable candidates. Comorbidity has a major impact on perioperative complications, which translates into longer hospital stays and more frequent readmissions. Concomitant diseases that increase the risk of rehospitalization are mainly cardiovascular disease, especially heart valve stenosis and heart failure. In addition to cardiovascular disease, respiratory disease and cirrhosis are also important. One criterion that is certainly crucial in-patient selection is ASA physical status (ASA, English American Society of Anaesthesiologists) (table 1).

ASA Physical Status is used to classify the severity of concomitant diseases, i.e., to assess the patient's

Table 1. ASA classification of physical condition

ASA PS 1	A healthy patient
ASA 2	A patient with mild systemic disease
ASA 3	A patient with severe systemic disease
ASA 4	A patient with systemic disease that permanently endangers their life
ASA 5	A moribund patient who will not survive without the surgery
ASA 6	Proven brain death

health status. The CCI (Charlson Comorbidity Index) was also used, which is a valid method for assessing general health status and assessing possible readmission. The most common reason for rehospitalization is infection, although new studies have shown that this type of DM has limited impact on postop-

erative morbidity and mortality (11). Studies aimed at determining the effect of age on the success of accelerated recovery algorithms have shown mixed results. Results of a study in Denmark on accelerated recovery algorithms and age showed that age 80 and above limits the success of accelerated recovery algorithms. The length of hospital stay increases due to older age, as does the number of readmissions due to perioperative complications (12). However, a recent study in the United Kingdom showed that people over the age of 85 benefited the most from an accelerated recovery algorithm. Hospitals using the accelerated recovery algorithm significantly reduced the number of readmissions compared to the average number of readmissions without the accelerated recovery algorithm, and the length of stay was reduced from 5 days to 4 days, with the greatest benefit observed in people over the age of 85 (13). It is because of these results that further research on the age of the patients and total joint arthroplasty is warranted.

Table 2. Paper results used in analysis

Year	Authors	Conclusions
2015	Courtney PM, Rozell JC, Melnic CM, Lee GC. Who should not undergo short stay hip and knee arthroplasty? Risk factors associated with major medical complications following primary total joint arthroplasty. (10)	Most major medical complications requiring additional physician interventions occur greater than 24 hours following primary THA/TKA. Patients with history of COPD, CHF, CAD, and cirrhosis should not undergo short stay or outpatient TJA.
2013	Jorgensen CC, Kehlet H. Role of patient characteristics for fast-track hip and knee arthroplasty. (12)	Fast-track THA and TKA with LOS of ≤ 4 days and discharge to home is feasible and safe, including in elderly patients with comorbidities.
2013	Clement RC, Derman PB, Graham DS, Speck RM, Flynn DN, Levin LS, Fleisher LA. Risk factors, causes, and the economic implications of unplanned readmissions following total hip arthroplasty. (14)	The 30-day readmission rate was 6.51%. Increased age, length of stay, and body mass index were associated with significantly higher readmission rates. The most common re-admitting diagnoses were deep infection, pain, and hematoma.
2016	Khan A, Girish P. Anesthesia for Ambulatory Major Total Joint Arthroplasty: The Future is Now! (11)	For these procedures to be performed safely on an outpatient basis, it is necessary to implement multidisciplinary, multimodal protocols that improve functional outcomes, enhance recovery, and reduce the need for hospitalization. These protocols include appropriate patient selection, preoperative optimization of comorbid conditions, and patient education. Postoperatively, the focus is on early mobilization and accelerated physical therapy.
2014	Starks I, Wainwright TW, Lewis J, Lloyd J, Middleton RG. Older patients have the most to gain from orthopaedic enhanced recovery programmes. (13)	In all patient's median length of stay was reduced when compared with both our own data before the introduction of the pathway (6 to 4 days) and national averages over the same time period for both hip and knee replacements (5 to 4 days).

Year	Authors	Conclusions
2008	Bolognesi MP, Marchant MH Jr, Viens NA, Cook C, Pietrobon R, Vail TP. The impact of diabetes on perioperative patient outcomes after total hip and total knee arthroplasty in the United States. (15)	This analysis of a large patient database indicates clinically relevant information for patients and surgeons, suggesting that patients undergoing THA and TKA demonstrate more complications and utilize more resources if they have the comorbidity of DM level II evidence.
2011	Ghomrawi HM, Franco Ferrando N, Mandl LA, Do H, Noor N, Gonzalez Della Valle A. How often are patient and surgeon recovery expectations for total joint arthroplasty aligned? (9)	THA patients with either lower or higher expectations than their surgeon had lower physical and mental health status scores. TKA patients with lower expectations compared to their surgeon had a higher expectation of complications.
2010	Yoon RS, Nellans KW, Geller JA, Kim AD, Jacobs MR, Macaulay W. Patient education before hip or knee arthroplasty lowers length of stay. (16)	Education participants enjoyed a significantly shorter LOS than nonparticipants for both total hip arthroplasty (3.1 +/- 0.8 days vs 3.9 +/- 1.4 days; $p=.0001$) and total knee arthroplasty (3.1 +/- 0.9 days vs 4.1 +/- 1.9 days; $p=.001$).
2013	Ibrahim MS, Khan MA, Nizam I, Haddad FS. Peri-operative interventions producing better functional outcomes and enhanced recovery following total hip and knee arthroplasty: an evidencebased review. (17)	Enhanced recovery, good functional outcomes, and short hospital stays following THA and TKA can be achieved through clinical pathways and protocols with multimodal interventions.
2009	Dowsey MM, Choong PF. Obese diabetic patients are at substantial risk for deep infection after primary TKA. (18)	There were no prosthetic infections in patients with diabetes who were not obese. This compares with 11 prosthetic infections in patients who were obese and diabetic and four prosthetic infections in patients who were obese but not diabetic. Morbid obesity and obesity combined with diabetes are risk factors for periprosthetic infection after TKA.
2004	Jibodh SR, Gurkan I, Wenz JF. In-hospital outcome and resource use in hip arthroplasty: influence of body mass. (19)	Compared with others, morbidly obese patients (BMI > or = 40 kg/m ²) had significantly longer mean operative time and higher mean intraoperative blood loss ($p<.05$), a trend toward more complications, but no significant difference in functional recovery and hospital use.
2015	Maurice-Szamburski A, Auquier P, Viarre-Oreal V, Cu villon Ph, Carles M, Ripart J, Honore S, Triglia T, Loundou A, Leone M, Bruder N. Effect of sedative premedication on patient experience after general anesthesia: a randomized clinical trial. (20)	The findings suggest a lack of benefit with routine use of lorazepam as sedative premedication in patients undergoing general anesthesia.
2000	Rodgers A, Walker N, Schug S, McKeeA, Kehlet H, van Zundert A, Sage D, Futter M, Saville G, Clark T, MacMahon S. Reduction of postoperative mortality and morbidity with epidural or spinal anaesthesia: results from overview of randomised trials. (21)	Neuraxial blockade reduces postoperative mortality and other serious complications. The size of some of these benefits remains uncertain, and further research is required to determine whether these effects are due solely to benefits of neuraxial blockade or partly to avoidance of general anaesthesia.
2010	Chang CC, Lin HC, Lin HW, Lin HC. Anesthetic management and surgical site infections in total hip or knee replacement: a population-based study. (22)	Total hip or knee replacement under general anesthesia is associated with higher risk of SSI compared with epidural or spinal anesthesia.
2007	Maurer SG, Chen AL, Hiebert R, Pereira GC, Di Cesare PE. Comparison of outcomes of using spinal versus general anesthesia. (23)	Compared with general anesthesia (GA), spinal anesthesia (SA) resulted in mean reductions of 12% in operative time, 25% in estimated intraoperative blood loss, 38% in rate of operative blood loss, and 50% in intraoperative transfusion requirements.

Year	Authors	Conclusions
2013	Harsten A, Kehlet H, Toksvig-Larsen S. Recovery after total intravenous general anaesthesia or spinal anaesthesia for total knee arthroplasty: a randomized trial. (24)	GA resulted in shorter LOS (46 vs 52 h, $p < 0.001$), and less nausea and vomiting (4 vs 15, $p < 0.05$) and dizziness (VAS 0 mm vs 20 mm, $p < 0.05$) compared with SA. During the first 2 postoperative hours, GA patients had higher pain scores ($p < 0.001$), but after 6 h the SA group had significantly higher pain scores ($p < 0.001$). Subjects in the GA group used fewer patient-controlled analgesia doses and less morphine ($p < 0.01$) and were able to walk earlier compared with the SA group ($p < 0.001$).
2011	Wylde V, Hewlett S, Learmonth ID. Persistent pain after joint replacement: prevalence, sensory qualities, and postoperative determinants. (25)	The association between the number of pain problems elsewhere and the severity of persistent postsurgical pain suggests that patients with persistent postsurgical pain may have an underlying vulnerability to pain. A small percentage of patients have severe persistent pain after joint replacement, and this is associated with depression and the number of pain problems elsewhere.
2008	Kerr DR, Kohan L. Local infiltration analgesia: a technique for the control of acute postoperative pain following knee and hip surgery: a case study of 325 patients. (26)	Most patients were able to walk with assistance between 5 and 6 h after surgery and independent mobility was achieved 13-22 h after surgery. Local infiltration analgesia is simple, practical, safe, and effective for pain management after knee and hip surgery.
2013	Perlas A, Kirkham KR, Billing R, Tse C, Brull R., Gandhi R., Chan VW. The impact of analgesic modality on early ambulation following total knee arthroplasty. (27)	Local infiltration analgesia was associated with improved early analgesia and ambulation. The addition of adductor canal nerve block was associated with further improvements in early ambulation and a higher incidence of home discharge.
2007	Montazeri K, Kashefi P, Honarmand A. Pre-emptive gabapentin significantly reduces postoperative pain and morphine demand following lower extremity orthopaedic surgery. (28)	Pre-emptive use of gabapentin 300 mg orally significantly decreases postoperative pain and rescue analgesic requirements in patients who undergo lower extremity orthopaedic surgery.
2005	Mizner RL, Petterson SC, Stevens JE, Vandenborne K, Snyder Mackler L. Early quadriceps strength loss after total knee arthroplasty. (29)	Patients who are managed with total knee arthroplasty have profound impairment of quadriceps strength one month after surgery. This impairment is predominantly due to failure of voluntary muscle activation, and it is also influenced, to a lesser degree, by muscle atrophy. Knee pain with muscle contraction played a surprisingly small role in the reduction of muscle activation.
2007	Kurtz S, Ong K, Lau E. Projections of primary and revision hip and knee arthroplasty in the United States from 2005 to 2030. (30)	By 2030, the demand for primary total hip arthroplasties is estimated to grow by 174% to 572,000. The demand for primary total knee arthroplasties is projected to grow by 673% to 3.48 million procedures. The demand for hip revision procedures is projected to double by the year 2026, while these large projected increases in demand for total hip and knee arthroplasties provide a quantitative basis for future policy decisions related to the numbers of orthopaedic surgeons needed to perform these procedures and the deployment of appropriate resources to serve this need.

Discussion

The most important factor that affects the outcome of the operation is the evaluation and optimization of accompanying diseases before the hip or knee joint replacement procedure. Smoking, low, or high body mass index (BMI, Body mass index), malnutrition are among the significant risk factors associated with possible complications. In the US, more than 8% of patients preparing for knee and hip arthroplasty have diabetes. Complications caused by diabetes are a tendency to infections and a prolonged stay in the hospital. To avoid possible complications, it is important that patients regularly control their blood sugar levels (15). A factor that can be influenced before performing arthroplasty to reduce the possibility of infection and improve the outcome of treatment is smoking.

The importance of the nurse's role starts from the beginning of the patient's reception, where patient's education is one of the most important ways through which the course of treatment and improvement of patient's recovery and the outcome of the operation can be influenced. Research has shown that preoperative education greatly affects the reduction of anxiety before the procedure and postoperative complications. The introduction of education programs, which usually start 3 weeks before surgery, has reduced hospital stay for 24 hours (16). During the education, it is crucial not only to inform the patient, but also their family. By educating family and friends, we ensure optimal care after leaving the hospital. The most important goal of education is to make the patient an active participant in the entire treatment process, and in this task the role and responsibility of the nurse is very significant (11).

In order for patients to undergo surgery as soon as possible, they need to be consulted with specialists, in which case nurses and surgeons propose indications for surgical treatment, allowing patients to find the greatest comfort in them. This alone can reduce fear and anxiety, build trust, and improve communication and outcomes. The patient is told about their current condition, treatment, upcoming surgery, what will happen before and after surgery, when they will be able to walk independently again, what surgery will be used, and what posture they will assume. The more knowledge that is passed on to the patient, the

more relaxed and cooperative they will be. Information must be clear, detailed, useful and simple (12).

In the last few years in developed healthcare systems, surgical techniques have been improved. From standard arthroplasty techniques, new approaches have been developed. Nowadays, what defines minimally invasive arthroplasty is the shorter length of the surgical incision and less surgical trauma. However, although the aesthetic aspect is very important to patients, as a rule it should not be of great importance. Minimally invasive surgery is certainly not performed only for the aesthetics, but also for other factors that affect the perioperative course and the course of rehabilitation itself. Minimally invasive surgical techniques allow minor dissection of soft tissue, including muscles, ligaments and joint capsule. Thanks to minimally invasive techniques, tissue trauma and pain are reduced, blood loss as well as the need for drainage are less, and the patient's mobility is increased. The minimally invasive technique requires an extremely skilled and experienced orthopaedic surgeon and corresponding increasingly sophisticated instruments and prostheses. Modern approaches to knee arthroplasty involve an incision smaller than 14 cm, avoiding quadriceps disruption, subluxation rather than twisting and dislocation of the knee. In total hip arthroplasty, the use of minimally invasive techniques results in greater mobility, reduced blood loss, and shorter hospital stays (6).

The results of the research showed that mortality in people who were under regional anaesthesia was reduced by 1/3 in contrast to people who were under general anaesthesia. Furthermore, the use of regional anaesthesia reduced the incidence of deep vein thrombosis by 44%, pulmonary embolism by 55%, the need for transfusion was reduced by 50%, and the incidence of pneumonia was reduced by 39% (21). As far as infections are concerned, research shows that the probability of infection is twice as high in patients who were under general anaesthesia than in patients who were under regional anaesthesia (22). Although it has been proven that regional anaesthesia has several advantages compared to general anaesthesia, there are also several disadvantages. Spinal anaesthesia in outpatients should be avoided. The reason is that spinal anaesthesia has many undesirable effects such as urinary retention, respiratory depression, itching (22).

The nurse's role in the postoperative period is primarily to help patient recover from anaesthesia. Af-

ter recovering from anesthesia, the patient requires intensive care. In order to receive full and complete care, the patient is transferred to the recovery room after anesthesia. Today, these wards are equipped with high-tech equipment to monitor the patient's vital signs and provide comprehensive care and control of the patient's condition. This room contains all instruments and equipment needed for emergency operations. These include ventilators, intubation and resuscitation equipment, defibrillators, as well as various infusions and necessary medicines. To ensure the best possible care, the patient's bed must be accessed from at least 3 sides. It is important to monitor vital signs and check dressings and drains. Pay special attention to the patient's breathing to avoid hypoxemia.

If the patient met the necessary criteria for discharge from the recovery room, the decision was made whether the patient remained in the recovery room or was transferred to postoperative anesthesia based on the assessment of clinical status by experienced staff using a specific point scale. Criteria for transferring patients from the post-anesthesia monitoring room to the surgical department (8):

- a. good respiratory function
- b. stable vital signs including blood pressure and pulse
- c. suitable orientation in time and space, answers coherently to simple questions, without signs of delirium
- d. satisfactory hourly diuresis
- e. without nausea and vomiting
- f. good control of postoperative pain
- g. without major losses on surgical drains that require quick surgical intervention
- h. patient in normothermia

After the surgery is complete and the patient is transferred from the recovery room, follow-up care continues on the ward. With the transfer to the ward, patient care is entirely up to the nursing staff. During the postoperative period, nurses must check vital signs, including temperature, and assess level of consciousness at least every two hours. Monitoring of vital functions provides information about the

patient's cardiorespiratory system and indicates possible complications. In addition, it is extremely important to monitor possible neurovascular changes in the operated limb. This includes skin tone, temperature, pulse, and capillary refill at least hourly. A nurse must monitor bleeding and control the amount of blood passing through the drain. Nurses' interventions are aimed at maintaining IV fluids and closely monitoring fluid balance during the postoperative period. Nurses frequently assess patient comfort and monitor and participate in the continuation of pain medication. Pain after surgery is the number one worry for patients, therefore it is important to consider pain control measures and explain how to manage pain before surgery. It is important for patients to understand the impact of pain on early mobility and recovery. To prevent thromboembolism and muscle wasting, the nurse encourages patients to move and exercise as soon as possible and provide enough training for them to continue exercising at home (8).

Optimizing the factors that cause pain, nausea and vomiting, orthostatic intolerance, will result in earlier discharge, rare unplanned admissions and greater patient satisfaction (11). It is necessary to educate the patient on the importance of personal hygiene, in order to prevent possible infections and complications around the surgical site (8).

With the surgery completed, the primary goals of the entire surgical team and the patient are early mobilization and expedited physical therapy. Although deceptively simple, this goal is often undermined by factors that need to be optimized before a patient is discharged from the hospital and begins home physical therapy (11). The caregiver should explain how to improve joint mobility and how to use assistive devices when changing positions and walking. This is important because after surgery, the patient is already familiar with the postural changes and has no doubts about how to perform specific movements (8).

In order for a patient to be discharged, they must meet several conditions. The patient should be able to stand unaided from a supine position. In addition, they should be able to stand up from a chair and walk 30 m unaided, and they should be able to ascend and descend stairs (11).

Conclusion

Hip and knee arthroplasty in day surgery is gaining in importance as a safe and cost-effective procedure. Recent literature confirms the importance of developing multidisciplinary clinical algorithms to accelerate recovery and improve perioperative safety. As the creation of clinical algorithms involves the entire perioperative team, nurses play an important role in creating processes related to postoperative care. During this time, the primary role of the nursing staff is to educate the patient on how to live with the implant while minimizing potential complications and adverse events.

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ULOGA MEDICINSKE SESTRE U ARTROPLASTICI KUKA I KOLJENA U JEDNODNEVNOJ KIRURGIJI

Sažetak

Uvod. Artroplastika je kirurški zahvat zgloba s izrazitim učinkom na poboljšanje njegove funkcije, smanjenje bolova te poboljšanje kvalitete života bolesnika. Stoga je izvođenje artroplastike, posebice kuka i koljena, u stalnom porastu, što za posljedicu ima dodatno financijsko opterećenje zdravstvenog sustava. Smatra se da bi financijskom rasterećenju moglo doprinijeti izvođenje zahvata u jednodnevnoj kirurgiji.

Cilj. Cilj je istraživanja pregledom literature utvrditi recentne spoznaje o izvođenju zahvata artroplastike kuka i koljena u jednodnevnoj kirurgiji te perioperacijskoj sestrinskoj skrbi, s posebnim osvrtom na prepoznavanje potencijalnih perioperacijskih komplikacija.

Metode. Pregled literature učinjen je pretraživanjem bibliografske baze podataka Medline preko sučelja PubMed (PMC) te selekcijom članaka objavljenih na engleskom jeziku u razdoblju od 3. ožujka 1992. do 30. prosinca 2021. Strategija pretraživanja kombinirala je ključne riječi: artroplastika, kuk, koljeno, komplikacije, jednodnevna kirurgija, zdravstvena njega. Ukupno je analizirano 22 rada.

Rezultati. Kao moguće rješenje problema komplikacija operacijskih zahvata artroplastike u jednodnevnoj kirurgiji literatura navodi upotrebu kliničkih algoritama ubranog oporavka. Algoritmi smanjuju troškove liječenja i smanjuju rizik komplikacija. Uz navedene prednosti, dolazi i do poboljšanja perioperacijskih ishoda te zadovoljstva bolesnika, kojima je omogućen

oporavak u ugodnoj okolini vlastitog doma, što ima posebnu važnost za uspješnost oporavka starijih bolesnika. Medicinska sestra mora uspostaviti empatijski odnos, poštivati pacijentovu jedinstvenost i individualnost te njegova prava da sudjeluje u svojem liječenju. Pacijent od medicinske sestre očekuje povjerenje, podršku te najbolju sestrinsku skrb.

Zaključak. Minimalno invazivna artroplastika zaslužna je za smanjeno traumatiziranje tkiva, smanjen gubitak krvi, manju poslijeoperacijsku bol i ublažen kirurški stresni odgovor te je zaslužna za povećanu pokretljivost zgloba kuka. Razvoj kirurgije i anestezije u jednodnevnoj kirurgiji sve više zahtijeva znatan doprinos medicinske sestre u poslijeoperacijskom oporavku.

Ključne riječi: kuk, koljeno, artroplastika, jednodnevna kirurgija, medicinska sestra, komplikacije
