

## INFORMATION AS AN INSTRUMENT OF CARE TO PATIENTS UNDERGOING ORTHOPEDIC SURGERY

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**ABSTRACT:** Objective: to identify the information obtained from patients who underwent Total Hip Arthroplasty (THA), related to the perioperative periods and after hospital discharge. Method: Observational study, of survey-type, conducted in three public hospitals in Rio de Janeiro in 2010, 2011, 2013 and 2015. Data collected through interviews with 113 patients admitted to hospital with indication for orthopedic surgery was organized into a table where the information was classified by perioperative periods and after discharge, and analyzed using simple descriptive statistics. Results: Prevalence of women, elderly and the main indication was fracture. Sixteen pieces of information were mentioned by the patients: eight on the preoperative period, one in the intraoperative period and seven on the postoperative period, of which only four were related to the post discharge period. Conclusion: According to the results, there is scarce information about the perioperative period of orthopedic surgery to meet the needs of patients and the poor knowledge of patients and caregivers about this period may lead to avoidable complications and cause deterioration of health status.

**DESCRIPTORS:** Information; Patient Care; Nursing; Professional-Patient Relationship; Orthopedic Nursing.

### INFORMAÇÃO COMO INSTRUMENTO DA ASSISTÊNCIA AO PACIENTE SUBMETIDO A CIRURGIA ORTOPÉDICA

**RESUMO:** Objetivo: identificar as informações recebidas pelos pacientes, relacionadas aos períodos perioperatório e alta hospitalar de Artroplastia Total de Quadril. Método: pesquisa observacional, tipo survey, realizada em três hospitais públicos no Rio de Janeiro em 2010, 2011, 2013 e 2015. Dados coletados com 113 indivíduos hospitalizados com indicação de cirurgia ortopédica, por entrevista, organizados em um quadro categorizando as informações pelos períodos perioperatórios e alta, e analisados utilizando estatística descritiva simples. Resultados: predominaram mulheres, idosos e a principal indicação foi fratura. Dezesesseis informações foram mencionadas pelos pacientes: oito sobre pré-operatório, uma sobre transoperatório e sete sobre pós-operatório das quais somente quatro estavam relacionadas ao período após a alta. Conclusão: os resultados demonstram a insuficiência de informações sobre o perioperatório de cirurgia ortopédica para atender às necessidades dos pacientes e que o conhecimento deficiente do paciente e seu cuidador pode levar a complicações evitáveis e causar deterioração do estado de saúde.

**DESCRIPTORIOS:** Informação; Assistência ao Paciente; Enfermagem; Relações Profissional-Paciente; Enfermagem Ortopédica.

### INFORMACIÓN COMO INSTRUMENTO DE LA ASISTENCIA AL PACIENTE SOMETIDO A CIRUGÍA ORTOPÉDICA

**RESUMEN:** Objetivo: identificar informaciones acerca de los periodos perioperatorio y alta hospitalaria de Artroplastia Total de Cuadril provenientes de los pacientes. Método: investigación observacional, del tipo survey, realizada en tres hospitales públicos en Rio de Janeiro en 2010, 2011, 2013 y 2015. Se obtuvieron los datos de 113 individuos hospitalizados con indicación de cirugía ortopédica, por medio de entrevista, organizados en un cuadro de informaciones por categorías de periodos perioperatorios y alta, y que fueron analizados utilizando estadística descriptiva simple. Resultados: hubo predominancia de mujeres, ancianos y la principal indicación fue por fractura. Los pacientes mencionaron dieciséis informaciones: ocho acerca del preoperatorio, una sobre transoperatorio y siete sobre posoperatorio. De estas solamente cuatro estaban relacionadas al periodo después del alta. Conclusión: los resultados muestran la insuficiencia de informaciones sobre el perioperatorio de cirugía ortopédica para atender a las necesidades de los pacientes y que el conocimiento deficiente del paciente y de su cuidador pueden causar complicaciones evitables, además de empeorar el estado de salud.

**DESCRIPTORIOS:** Información; Asistencia al Paciente; Enfermería; Relaciones Profesional-Paciente; Enfermería Ortopédica.

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## ● INTRODUCTION

Total Hip Arthroplasty is the surgical replacement of the hip joint indicated for joint degenerative diseases and fractures in this region, providing relief of pain, recovery of joint mobility and a significant improvement in the quality of life. The surgical procedure involves responsibilities of the hospital, health team, patients and family members, to varying degrees, and to ensure positive postoperative results, adequate patient preparation is essential <sup>(1-5)</sup>.

Any surgery, whether elective or emergency, is a complex procedure. Although the environment and treatment-related care routines vary among institutions, careful planning is critical after surgery. Since THA is among the most complex orthopedic surgeries, the nursing team must have extensive technical and scientific knowledge of the procedure to meet care demands not only during the hospitalization, but also for the preparation of the patient and his relatives for discharge and rehabilitation.

To prevent the occurrence of complications during orthopedic surgeries, appropriate interventions during hospitalization, careful monitoring and preparation of patients for discharge are needed. The information provided to the patient on the pre, trans (perioperative) and postoperative periods, by the multidisciplinary healthcare team has a special impact on the recovery of this group of patients <sup>(2,4-5)</sup>.

According to the vocabulary DeCS - Descriptors in Health Sciences, information can be defined as communication or receipt of knowledge about a given subject. In this context, considering information as the means by which the individual obtains knowledge about his/her disease, being capable of making regarding health and treatment, the present study used the term "information" to express the communication or receipt of one or various pieces of information about a particular topic, either through guidance, educational interventions, counseling, instruction, training, teaching, health education, or any other similar activity that involved the patients and their family members or caregivers.

Patient-centered information based on the protocols established by the healthcare institution may reduce the level of anxiety and fear related to the preoperative period and surgery and increase the understanding about the treatment process, ensuring the delivery of high quality of care and positive outcomes. It enables the patients and their families to deal with their health problems and anticipate the prognosis. Information should focus on the capacity of patients to manage their health conditions, stimulating their autonomy, considering their ability to understand, motivations, prior knowledge and experiences <sup>(6-8)</sup>.

According to data from January 2017 of DATASUS <sup>(9)</sup>, of the 438,690 hospital beds available in Brazil, 17,488 are dedicated to orthopedic surgical patients, which is more than the hospital beds dedicated to clinical and surgical hospitalizations of Cardiology, for example, with 12,974 beds. Also, there are few publications on Orthopedic and Trauma Nursing, few articles were published in national journals, and access to relevant international journals is difficult. Therefore, research on this nursing area, and particularly, the provision of patient educational materials designed for individuals undergoing orthopedic surgery, are evidently needed to provide timely and appropriate information that meets the patients' real needs.

Thus, the encouragement of reflection about the identification of information needs related to the hospitalization and post discharge periods of patients who underwent orthopedic surgeries (particularly, total hip replacement surgery) provides a justification for this article, whose principles can be applied to patients of any other surgical health facility. Therefore, the present study aimed to identify the information provided to patients who underwent THA on the pre, perioperative and postoperative periods, as well as in the post hospital discharge period.

## ● METHOD

Quantitative observational study based on a survey methodology. Data was collected through interviews with 113 hospitalized patients. Individuals of both genders over 18 years old who underwent Total Hip Arthroplasty admitted to three public hospitals in the city of Rio de Janeiro were included.

Individuals with cognitive impairment were excluded from the study.

Data was collected at three different periods: from October 2010 to October 2011, May to July 2013 and April 2015, from Monday to Friday, at a time previously agreed with the participants. Data related to information concerning the pre, trans and postoperative periods and post discharge after Total Hip Arthroplasty was collected by the interviewers and organized in a table, as follows: pre, trans, postoperative (during hospitalization and after discharge). The data was then submitted to descriptive statistics with the use of Microsoft Excel.

Prior to the discussion of the results, identification of the information needed by patients undergoing the referred surgery was obtained in a search of the following data and databases: Base de dados de enfermagem (BDENF); Biblioteca Cochrane; Cummulative Index to Nursing and Allied Health Literature (CINAHL); EBSCO Information Services; Excerpta Medica dataBASE (EMBASE); Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS); PubMed; Scientific Electronic Library Online (SciELO) and SciVerse Scopus (SCOPUS). Articles published over the last 10 years (2006-2016) in Portuguese, English and Spanish, available in full text were included in the selection. The descriptors selected in MeSH® were: “arthroplasty, replacement, hip” AND “Total Hip Replacement” and “Artroplastia de Quadril” in DeCS.

This project was submitted to the Research Ethics Committees of the selected health institutions (under statements 312A.2010, 36.10; 2720), in accordance with Resolution 466/2012<sup>(10)</sup>.

## ● RESULTS

Of the 113 patients that participated in this study, 71 were women (62.8%) and 42 (37.2%) men. The patients were aged 29-92 years (mean  $76.6 \pm 6.34$ ), and most were aged 60-89 years (87 individuals, 77%). Total hip replacement indications were fracture (54 individuals, 47.8%), osteoarthritis (20, 17.7%), avascular necrosis (19, 16.8%), infection (11, 9, 7%) and surgical revision (nine, 8%). The complaints made by the participants during the preoperative period related to the indication for surgery were pain (97; 85.8%), functional limitation (96; 84.9%), limitations in daily activities 91, 80.5%), stiffness (38; 33.6%) and tingling (two, 1.8%).

The present study listed the pieces of information related to care in the pre, intra and postoperative periods of Total Hip Arthroplasty, provided by health professionals that participated in the care process, reported by the patients. Such information was recognized by patients as important for their treatment.

The pieces of information the 113 patients reported receiving during their hospital stay in the three hospitals surveyed are shown in Chart 1.

Chart 1 – Information provided by the 113 participants who underwent Total Hip Arthroplasty. Rio de Janeiro, RJ, Brazil, 2015 (continues)

Information	n (%)	Period
Indication of surgery	109 (96.4)	Preoperative
Preoperative body hygiene	81 (71.7)	Preoperative
Need to observe preoperative fasting	41(36.2)	Preoperative
Location and type of anesthesia	28 (24.8)	Perioperative
Care of the dressing and drain	28 (24.8)	Postoperative (hospital)
Physiotherapeutic follow-up after hospital discharge	21 (18.6)	Postoperative (discharge)
Carrying out bed exercises in the postoperative period	19 (16.8)	Postoperative (hospital)
Need of assessment by other specialists before surgery	18 (15.9)	Preoperative
Maintenance of dual abduction pillow	18 (15.9)	Postoperative (hospital)
Use of medication for pain after hospital discharge	17 (15)	Postoperative (discharge)
Preoperative assessment of the anesthetist	10 (8.8)	Preoperative

Removal of dental prosthesis before surgery	10 (8.8)	Preoperative
Dressing change after hospital discharge	6 (5.3)	Postoperative (discharge)
Need to suspend surgery	6 (5.3)	Preoperative
Pre-operative bed mobilization	3 (2.6)	Preoperative
Time of postoperative rehabilitation	1 (0.9)	Postoperative (discharge)

It should be stressed that, although researchers are aware the three hospitals investigated established routines for the perioperative care of patients in all the teams, no other piece of information related to the hospitalization period or to the post discharge period was mentioned by the individuals surveyed besides those recorded here.

## ● DISCUSSION

New surgical techniques combined with shorter hospital stays reduce the possibility of adequate and individualized preparation of patients for treatment and rehabilitation. Thus, educational interventions should start as early as possible to ensure sufficient time for the patients to understand and retain the information received. Such information is essential to prepare the patients to deal with problems occurring during hospitalization and after discharge, at home, which increase the risk of complications and mortality<sup>(7)</sup>.

In the present study, we present data from 113 patients who underwent Total Hip Arthroplasty, one of the most complex surgeries in Orthopedics. Nursing care for these patients requires knowledge related to the perioperative stages and post hospital discharge period, to make sure the patient has appropriate follow-up care and any possible complications are avoided or reduced.

The data obtained in this study is consistent with other studies that found that hip Arthroplasty is more frequent in women than in men, and more prevalent among the elderly<sup>(3,8)</sup>. The treatment of elderly undergoing Total Hip Replacement aims to restore their independence, mobility, ensure a good mental state and reduce the risk of premature mortality. When the procedure is performed in younger individuals, implant durability and survival and monitoring of complications such as loosening, wear and displacement are the main concerns<sup>(11)</sup>.

Fracture, osteoarthritis and avascular necrosis were the main causes of surgical indication among the respondents, with a predominance of fractures. The other indications were infection and revision surgery. Most hip fractures are caused by accidents and are a major cause of morbidity and mortality among the elderly. Osteoarthritis stands out as one of the most common joint diseases in the elderly population and is one of the main causes of morbidity and disability in this group. Revision surgery is usually related to implant failure, which may occur due to mechanical reasons (prolonged use of the prosthesis, dislocation, periprosthetic fracture) or biological (inflammation, infection)<sup>(1,6,11-12)</sup>.

Pain, functional limitation and limitation of daily activities were present in more than half of the patients, followed by stiffness and tingling. These symptoms establish a pattern that is directly related to the surgical indications shown in this study and, in such cases, Total Hip Arthroplasty usually provides satisfactory results for the resolution of these problems<sup>(6)</sup>.

The 113 patients admitted to the three different hospitals that participated in this study cited only 16 pieces of information: eight related to the preoperative period, one related to the perioperative period and seven on the postoperative period. Of the latter, only three were related to the post discharge period.

Regarding the preoperative period, patients who receive extra information during hospitalization tend to recover faster and with positive results. Patients should also be informed on the procedures conducted to be encouraged to actively cooperate with the proposed therapeutic plan, understanding its limitations and possibilities. Such information should include the period of hospitalization and go beyond the health institution to comprise the daily routine of the patients, to minimize possible

complications related to the postoperative period<sup>(7)</sup>.

The information reported by the individuals surveyed and related to the preoperative period, although important, do not contemplate the minimum amount of information to be delivered for patients undergoing the referred surgery to ensure their satisfactory recovery.

Several essential pieces of information related to the preoperative period were not mentioned by the respondents, such as: information about the type and maintenance of the prosthesis; risk of surgery and possible complications; restrictions and limitations related to surgery; consent for surgery; problems and interventions related to anxiety, fear, sleep disorders; stimulus to self-care considering patient limitations; general care related to nursing and prevention of disuse syndrome; drug therapy designed to treat the problems identified and changes in daily therapeutic schemes; laboratory and imaging tests; preoperative assessment by a nurse of the Surgical Center<sup>(6,13-20)</sup>.

The following risks were also omitted: risks related to anesthesia; information about the safe surgery protocol; need for social support; care and restrictions during post-anesthetic recovery and after return to the inpatient unit; limitations in the postoperative hospital period and in the post discharge period; care after discharge; residential adaptations and modifications; presence and control of pre and postoperative pain; need for blood transfusion; evolution and treatment of comorbidities; need for referral to the Intensive Care Unit in the postoperative period and, pre-anesthetic medications and referral to the Surgical Center<sup>(6,13-20)</sup>.

Regarding the pieces of information mentioned by the patients related to the perioperative period, these only concerned the site and type of anesthesia, and were cited by a small number of respondents.

Other pieces of information related to the period of time spent in the Surgical Center immediately before and after the surgery, were not mentioned, such as: patient reception and assessment by the nurse and the anesthetist; referral to the operating room and positioning for anesthesia; safe positioning for surgery; safe surgery checklist; need for medications and blood transfusion; use of a dual abduction pillow (spica cast or abduction pillow) shortly after surgery to avoid dislocation of the prosthesis<sup>(3-4,6-7,14,20-21)</sup>.

Also, information about strict bed rest; transfer to post-anesthetic recovery; presence of catheters, drains, and surgical dressing; monitoring; surveillance and postoperative safety; control of pain; specific measures to control nausea, vomiting, confusion, agitation; hypothermia; control of hemodynamic status; prophylaxis of deep vein thrombosis; intraoperative information; control of risk situations; referral to the intensive care unit<sup>(3-4,6-7,14,20-21)</sup>.

In addition to care-related information routinely transmitted by the nursing team to patients during the postoperative period, there are many other pieces of information tailored to meet the patients' individual needs. Therefore, the nursing team is responsible for transmitting and receiving relevant information to help the patients cope with a period of important restrictions and care such as the postoperative period of Total Hip Arthroplasty.

Important pieces of information on postoperative care were not mentioned by the patients, such as: strict bed rest until authorization by the surgeon; surveillance and safety of patients with an altered state of consciousness; specific mobilization in bed; control of pain and pain related to home exercises; neurovascular assessment; control of vital signs and blood glucose; control of bowel elimination (risk of constipation induced by opioids)<sup>(6,16-17,19,22-25)</sup>.

Other pieces of information suppressed concerned general nursing care; specific drugs; training for patient and/or family members on medication administration, dressing/bandages, identification of complications and specific care related to surgery in the post-discharge period; need for maintenance of drains, catheters, etc.; diet (availability and compliance); control of conditions that may affect early mobilization (pain, nausea, vomiting, altered state of consciousness, etc.); prevention of deep vein thrombosis; care targeted to the prevention of disorders related to the disuse syndrome; make dressing; early identification and control of complications; activity and rest; preparation of the patient and family for discharge<sup>(6,16-17,19,22-25)</sup>.

After discharge, patients are more susceptible to the problems and complications related to the surgery, since they are no longer in an environment controlled by professionals, such as the hospital.

This is a critical period when most problems related to surgery can result in another hospitalization, a new surgery, sequelae, and even death. Preparation for this period is critical to ensure the success of recovery since patients must be able to manage their care outside the hospital setting. The success of surgery, treatment and maintenance of quality of life after surgery may depend on proper preparation of patients and their family members. However, in the present study the participants reported receiving insufficient information during the interviews.

Other essential information that should be known not only by patients, but also by their family members or caregivers, include: safe home environment; limitations and restrictions related to bed (or non-bed) mobility; use of devices and care during locomotion; early identification of complications; hygiene; nutrition and hydration; control of bowel eliminations; specific medications, including anticoagulant therapy; monitoring and control of comorbidities; restrictions on sexual activity; restrictions on work activity; home exercise program; follow-up appointments; and fall prevention <sup>(3,6-7,11,16-19,23-24,26)</sup>.

Insufficient knowledge of patients undergoing total hip arthroplasty on the perioperative periods and post hospital discharge, regardless of its cause, can lead to avoidable complications and cause deterioration of their health status, especially in the case of elderly patients. Information should be recognized as an essential part of the treatment and be part of the assignments of all the health professionals involved in the care.

All patients and caregivers should receive the necessary information at various moments, not only at discharge. Such information should be tailored to the specific needs/characteristics of the patients and their family relatives, and provided on a timely basis, as well as later at the time of hospital discharge. Cognitive level, anxiety, presence of pain, type of language used, among others, are factors that can interfere negatively in the reception and understanding of the information and its retention.

Competent nursing professionals understand the importance of providing information to the surgical patients, which is demonstrated by the ability to effectively and safely perform their functions and tasks, using evidence and critical thinking abilities. This requires the development of an evidence-based practice, specific techniques and knowledge. The development of guidelines and multidisciplinary care protocols to address patients holistically – in all dimensions, is recommended by good nursing practices

The limitations of this study concern the lack of articles on Orthopedic Nursing in Brazil and the reduced access to specialized international journals, which deprives nurses of important scientific and technical expertise they need to properly perform their duties.

The results of this study will contribute to identify the level of understanding and/or retention of information received by individuals submitted to Total Hip Arthroplasty, a surgery with high complexity and significant morbidity and mortality in hospital practice and after hospital discharge. It is expected that these findings help health professionals identify the weaknesses related to patient preparation, at the different surgical stages, during the hospitalization process, and related to post discharge home care. Other health professionals may as well benefit from these findings. It is also hoped that this study will serve as a foundation for future studies on the subject.

## ● CONCLUSION

Any information provided to patients, regardless of the method used, related to the perioperative and post discharge periods, helps mitigating the anxiety and fear generated by the surgery and prepares the patient to actively participate in the treatment and cope with the limitations associated to the surgery, reducing the risk of post discharge complications.

The patients interviewed in the present study reported receiving insufficient information from health professionals regarding the perioperative and post discharge periods of total hip arthroplasty. The study demonstrated that providing adequate information tailored to the specific needs of the patients on a timely basis, reinforcing such information at hospital discharge, is essential to ensure satisfactory patient recovery.

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