



Outpatient Total Hip Arthroplasty in a Chilean Provincial Hospital

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Abstract

Introduction: Total hip arthroplasty is a procedure with increasing demand, which affects waiting times, use of beds and ward. An outpatient hip arthroplasty program was proposed in our center based on successful international experiences.

Materials and methods: Retrospective study that considers patients who underwent outpatient surgery in the period December 2022 to March 2023.

Results: Total 45 patients, all discharged home on the same day. The majority were young patients with an average age of 56.7 years. The diagnosis of secondary osteoarthritis due to hip dysplasia was more frequent. There was no transfusion requirement and 2 patients were readmitted for pain. One complication was recorded at the 3-month follow-up. Patient satisfaction was high.

Conclusion: It is possible to perform safe outpatient hip arthroplasty in our environment and population.

Keywords: Outpatient; Arthroplasty; Hip; Coxarthrosis

Abbreviations

CRS: Centers of Medicare and Medicaid Service; ASA: American Society of Anesthesiologist; BMI: Body Mass Index; VAS: Visual Analogue Scale

Introduction

Total hip arthroplasty is in increasing demand due to the aging of the population and a greater indication for surgery. This demand affects waiting times, use of beds and operating room [1]. One solution to this problem is outpatient surgery, which is possible due to the progressive decrease in hospitalization times, advances in anesthesia and analgesia, and early mobilization [2-3].

The United States has seen an increase of <2% to 5% in outpatient hip arthroplasty between 2010 and 2017. In 2020, the CRS eliminated hip arthroplasty as an inpatient-only benefit [2].

In 2022, an Outpatient Total Hip Arthroplasty program was designed and implemented in our center. This design was based on successful international experiences and adapted to the local reality.

Materials and Methods

Retrospective study, which considers patients who underwent outpatient total hip arthroplasty in the period December 2022 to March 2023.

Patients were selected under the following inclusion criteria: ASA I and II, simple coxarthrosis, BMI less than 40, without intellectual disability, urban residence and having a companion. The exclusion criteria were: ASA III or more, complex primary coxarthrosis (previous surgery, presence of osteosynthesis, high dysplasia, post-trauma), intellectual disability or psychiatric pathology, rural residence or unsuitable housing, absence of a companion. A home

visit was carried out to evaluate suitable address and were scheduled for an informative interview, where they were instructed on the procedure.

All surgeries were performed under spinal anesthesia and a direct lateral approach. No drainage was used. After surgery they were transferred to the recovery room, where radiographic control was performed and an elastomeric infusion pump with ketorolac 60 mg associated with metamizole 4 g was installed. They were discharged under the following criteria: controlled pain (VAS less than or equal to 4), stable hemodynamics, absence of nausea, no motor block and spontaneous urination.

The patients were taken home by ambulance with their companion, with an elastomeric pump installed and functioning, with the indication of bed rest until the morning medical visit the next day. The morning after surgery, the patients received a medical visit, where physical therapy was performed and oral medication was started. The visit was repeated up to three times and the first hospital check-up was 2 weeks later.

The following data were documented: gender, age, BMI, diagnosis, Tönnis classification, type of hip prosthesis, operating time, need for transfusion, readmissions, VAS at 12 and 36 hours, at one month and at three months, standing and walking on the first day, appearance of complications during a three-month follow-up. User satisfaction was evaluated by asking the patient if they recommend the program.

Results

During the study period, 45 patients underwent surgery under this program and all met the criteria for discharge home. Nineteen patients were men (42%) and 26 were women (58%). The average age was 56.7 years with a range of 34 to 79 years. The average BMI was 31.5 kg/m², with a range of 22.1 to 39.4 kg/m².

Regarding the diagnosis, 18 patients (40%) underwent surgery for primary coxarthrosis, 27 patients (60%) for secondary coxarthrosis. Of the secondary coxarthrosis, there were 15 patients with hip dysplasia, 8 with femoroacetabular impingement and 4 patients with osteonecrosis. From the Tönnis classification, there were 10 Tönnis 1 patients (22%), 17 Tönnis 2 patients (38%), 18 Tönnis 3 patients (40%) and no Tönnis 4 patients.

The majority were cementless prostheses, with 44 patients (98%), and there was only 1 case of hybrid prosthesis (2%). The

average operative time was 42.9 minutes, with a range of 28 to 70 minutes.

There was no requirement for transfusions and 2 patients (4%) were readmitted for pain. The average postoperative VAS was 4.2 at 12 hours, 3.2 at 36 hours, 1.9 at 1 month, and 1.4 at 3 months. The majority achieved walking and standing on the first postoperative day, with 43 and 41 patients respectively (96 and 91%). At three months, only one complication (2%) was recorded, which was an acute periprosthetic joint infection.

Forty-one patients (91%) recommended the program, of which 7 patients had a previous contralateral prosthesis, and the remaining 34 stated that they would operate on their other hip in the outpatient program. Four patients (9%) did not recommend the program: 2 patients who were readmitted due to pain, 1 patient with a complication (acute periprosthetic joint infection) and 1 patient who did not like the frequency of controls.

Discussion

Our patients for outpatient surgery are young and without comorbidities, mostly with secondary coxarthrosis, which is consistent with international literature [4]. All were operated on through a direct lateral approach, which does not influence complications or readmissions [1], so the approach can be chosen according to the preference of the surgeon and the patient [5].

Complications and readmissions were low, which is consistent with recent international literature [4-6]. The recorded acute periprosthetic infection could not have been prevented by a longer hospital stay. Patients evaluated the program favorably, and their observations will be included to improve the quality of service.

Although there was a low incidence of complications, probably the most complex cases will not be candidates for outpatient surgery, because they involve longer procedures, with greater blood loss and more complications.

The limitations of our study are: the small sample size, there was no control group of hospitalized patients and the follow-up can be considered short.

Conclusion

Arthroplasty program can be performed safely in our environment and population, since complications and readmissions were low. Patients rated the outpatient program favorably.

Conflict of Interest

None of the authors have conflicts of interest.

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