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Rates and reasons for 30- and 90-day readmission following primary total hip arthroplasty

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Introduction

The continuous rise in healthcare costs has placed emphasis on reducing unplanned readmissions following total hip arthroplasty (THA). The rates and reasons for readmission vary significantly in the literature(1–3). Furthermore, few studies have investigated THA readmissions in European countries, in healthcare systems in which insurance status has no direct influence on access to care. We aimed to determine the rates and reasons for readmission after primary THA, and to assess which surgical procedures were most frequent following readmission.

Methods

We used the Finnish Hospital Discharge Register (FHDR) to collect data on all consecutive primary THA procedures performed at our institution during a two-year period (2014–2015). We further queried the database for readmissions to any hospital in the region during the first 30 and 90 days after discharge. A chart review provided the primary reason for readmission.

Any planned readmissions or readmissions unrelated to the index procedure were excluded. Medical records provided data on age, gender, readmission length of stay, and surgical procedures performed during the readmission hospitalization.

Results

A total of 1 633 primary, elective THAs were performed during the study period. The 30- and 90-day readmission rates were 6.8% and 10.0%, respectively. Readmitted patients averaged 66.8 years of age (standard deviation, 12.6 years) and median readmission length of stay was 5 days (interquartile range, 6 days). Women comprised 60.4% of all those readmitted. During the first 30 days after discharge, surgical site infection (36.9%) was the leading cause of readmission, followed by dislocation (18.9%) and wound complications (9.0%) (Table 1). At 90 days after discharge, surgical site infection accounted for 30.5% of the readmissions, followed by dislocation (23.8%) and periprosthetic fracture (8.5%) (Table 2).

Table 1

<i>Ten most common reasons for unplanned 30-day readmissions</i>		
<i>Reason</i>	<i>n</i>	<i>% of readmissions</i>
Infection	41	36.9 %
Dislocation	21	18.9 %
Wound complication	10	9.0 %
Periprosthetic fracture	8	7.2 %
Hematoma	6	5.4 %
Cerebrovascular complication	2	1.8 %
Other mechanic complication	2	1.8 %
Other fracture	2	1.8 %
Cellulitis	2	1.8 %
Urinary complication	2	1.8 %
Total No. of readmissions	111	100%

Table 2

<i>Ten Most Common Reasons for Unplanned 90-day Readmissions</i>		
<i>Reason</i>	<i>n</i>	<i>% of readmissions</i>
Infection	50	30.5 %
Dislocation	39	23.5 %
Periprosthetic fracture	14	8.5 %
Wound complication	12	7.3 %
Cerebrovascular complication	7	4.3 %
Hematoma	7	4.3 %
Component subsidence	4	2.4 %
Cellulitis	2	1.2 %
Other mechanic complication	2	1.2 %
Myocardial infarction	2	1.2 %
Total No. of readmissions	164	100%

A quarter (25.6%) of all readmitted patients required surgical treatment. The most common surgical intervention was irrigation and debridement (45.2%), followed by femoral stem revision (21.4%).

At 90 days, readmission for surgical reasons (82.3%) occurred five times as often as readmission for medical reasons (17.4%). The most common causes of medical readmissions were cerebrovascular- (24.1%), cardiac- (13.8%), and urinary complications (10.4%).

4. Weinberg DS, Kraay MJ, Fitzgerald SJ, Sidagam V, Wera GD. Are Readmissions After THA Preventable? *Clin Orthop Relat Res.* 2017;475(5):1414-23.

5. Schairer WW, Sing DC, Vail TP, Bozic KJ. Causes and frequency of unplanned hospital readmission after total hip arthroplasty. *Clin Orthop Relat Res.* 2014;472(2):464-70.

Discussion and conclusions

Readmission rates for unplanned, related-cause readmissions were higher than generally reported in the literature (1,4). Most readmissions following THA were related to surgery, which is in line with previous studies (5). Interventions aimed at reducing surgical site infection and dislocation are two key areas in potentially reducing readmissions following THA.

References

1. Kurtz SM, Lau E, Ong K, Adler E, Kolisek F, Manley M. Hospital, Patient, And Clinical Factors Influence 30- and 90-Day Readmission Following Primary Total Hip Replacement. *J Arthroplasty.* 2016;31(10):1-9.
2. Sibia US, Mandelblatt AE, Callanan MA, MacDonald JH, King PJ. Incidence, Risk Factors, and Costs for Hospital Returns After Total Joint Arthroplasties. *J Arthroplasty.* 2017;32:381-5.
3. Lavernia CJ, Villa JM. Readmission Rates in Total Hip Arthroplasty: A Granular Analysis? *J Arthroplasty.* 2015;30(7):1127-31.