

Perioperative Periprosthetic Fractures Associated With Primary Total Hip Arthroplasty.

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Abstract

BACKGROUND:

Periprosthetic fracture (PPF) is a rare but devastating complication of primary total hip arthroplasty (THA). While PPF is associated with increased morbidity and mortality, early revision rate, and poor patient outcome, there is a paucity of data on patient and hospital-dependent risk factors. Using a large administrative database, we investigated epidemiology and the risk factors associated with perioperative PPF after primary THA.

METHODS:

We performed a retrospective review of the National Inpatient Sample records from 2006 to 2011 and identified 1062 PPFs of 1,187,969 patients using International Classification of Diseases, Ninth Revision code for PPF (996.44). We then analyzed sociodemographic characteristics, comorbidities, and hospital characteristics of our study population.

RESULTS:

The overall incidence of PPF in National Inpatient Sample database was 0.089% (8.9 per 10,000 THAs). Patient-dependent risk factors were: female (odds ratio [OR] 1.93, 95% confidence interval [CI] 1.67-2.22), low household income (OR 1.4, 95% CI 1.18-1.65), Medicaid (OR 1.89, 95% CI 1.39-2.57), and uninsured (OR 2.74, 95% CI 1.63-4.61). Patients with malnutrition and hemiparesis/hemiplegia were associated 10-fold and 6-fold risk of PPF. Nonteaching hospitals (OR 1.15, 95% CI 1.01-1.32), hospitals in northeast (OR 1.29, 95% CI 1.04-1.59), and rural hospitals (OR 1.27, 95% CI 1.06-1.53) had higher incidence of PPF.

CONCLUSION:

Our study demonstrates that the incidence of PPF was low in our study population, and greater awareness is needed when performing primary THAs in patients with risk factors identified in our study to prevent PPF.