

Factors Affecting The Rate Of Surgical Site Infection In Patients After Operation Of Hip Following A Fracture Of Neck And Intertrochanteric Of The Femur In Hospital Melaka

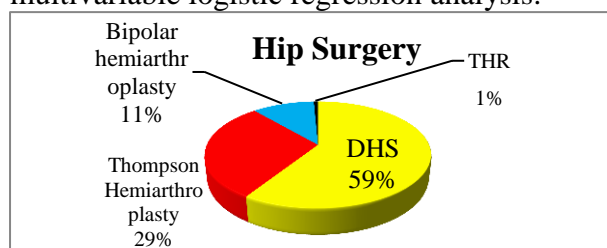
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INTRODUCTION:

Hip fractures remain a leading cause of excessive morbidity and premature mortality among older population. The overall incidence of hip fractures was 90 per 100 000 individuals in Malaysia. Surgical site infection can be a devastating complication of hip surgery, when performed in all patients with a fracture of the femoral neck and intertrochanteric fracture. It results in a prolonged stay in hospital, a poor outcome and increased costs. Many studies have identified risk and prognostic factors for deep infection. The aim of this study was to clarify the risk and prognostic factors causing deep infection after hip surgery.

MATERIALS AND METHODS:

This is a retrospective cohort review study from Hospital Melaka from January until December year 2017. A total of 181 patients undergoing hip surgery included in the study which comprised of 100 dynamic hip screws, 50 Thompson hemiarthroplasty, 18 bipolar hemiarthroplasty and 13 total hip replacements. We analyzed the potential peri-operative risk factors with univariable and multivariable logistic regression analysis.



RESULTS:

A total of 18 patients (10%) had a surgical site infection, and 9 (4.9%) developed a deep infection. After univariable analyses, the multivariable model showed that postoperative care was a significant prognostic factor (odds ratio (OR) 0.90, $p = 0.040$) for the development of an infection. Secondly, obesity (OR 8.5, $p < 0.001$) was another factor of surgical site infection. Thirdly, the

development of a hematoma (OR 9.6, $p < 0.001$) and an operating time of < 45 mins (OR 5.1, $p = 0.05$) or > 90 mins (OR 2.7, $p = 0.04$) were also significant factors. Surprisingly, smoking did not yield statistically significant associations with infections.

CONCLUSION:

There was a significant association between postoperative care and the rate of deep infection. Secondly, a hematoma and both shorter and longer operating times were associated with an increased risk of deep infection after hip surgery. No association was found between deep infection and the anatomical approach, the time when surgery was undertaken and the use of a drain. This study had few limitations. The important variables that did not been captured in the data are not feasible to be analyzed and the sample size was relatively small.

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