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Introduction

Dislocation is a well recognised complication of total hip arthroplasty. Our aim was to identify pre-operative and intra-operative factors that highlight patients at risk of post operative dislocation.

Method

Data was prospectively collected on a consecutive series of 2899 total hip arthroplasties undertaken between July 1997 and December 2007. All operations were performed in one unit by 14 different surgeons. In order to ensure accuracy, our local database was cross-referenced with a Scottish Arthroplasty Database for the same time period. Age, sex, body mass index(BMI), surgeon, surgical approach, volume and head size of the implanted prosthesis were studied using SPSS version 13.0 computer software (SPSS Inc. Chicago, IL). Association between the pre-operative/intra-operative factors and post operative dislocation were tested by chi-squared test for categorised factors and t-tests for quantitative factors. Multiple logistic regression was used to test the significance of factors in predicting dislocation after adjusting for one another.

Results

After a minimum follow-up of 12 months, 78 patients (2.7%) were found to have had one or more dislocation. BMI of greater than 35kg/m^2 is a significant pre-operative predictor of total hip arthroplasty dislocation ($P<0.001$). Those with a BMI less than 35kg/m^2 had a dislocation rate of 2.3% compared with a rate of 6.7% in those over 35kg/m^2 . The operating surgeon is also a significant predictor of dislocation ($p<0.001$). These factors remain significant after multiple logistic regression analysis. None of the remaining factors including head size, had a significant impact on dislocation rates.

Conclusion

Our results demonstrate the importance of BMI and operating surgeon in determining post operative dislocation.