

Knee osseous

Antibiotic-loaded bone cement in primary total knee arthroplasty

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Abstract

INTRODUCTION

Infection following total knee arthroplasty (TKA) is a devastating and fearful complication. The use of antibiotic-loaded bone cement (ALBC) as a prophylactic measure in primary TKA is controversial. Some authors advocate the potential to decrease the risk of infection, but concerns regarding mechanical properties, systemic toxicity, allergic reactions, microbial resistance and cost continue to persist.

OBJECTIVES

To determine if the use of ALBC is effective in decreasing the infection rate following primary TKA as compared to plain bone cement (PBC).

METHODS

We surveyed 865 consecutive primary TKA (performed between 2000 and 2010). Bone cement was used in all procedures. The ALBC contained 1 g of gentamicin in 40 g of cement in a premixed form. All patients received systemic antibiotic prophylaxis. All the surgeries were performed without clean-air measures such as laminar flow or isolation suits. Demographic, clinical and surgical data was recorded. Statistical analysis was performed using χ^2 , Fisher exact test and t-tests, as appropriate.

CONCLUSION

The overall infection rate is similar to that described in the literature.

In this study, the use of ALBC showed an important decrease in the infection rate, although not statistically significant. The future inclusion of more patients in the study may reach statistical significance.

Fever in the postoperative period may be a warning sign for TKA infection, justifying a closer follow-up.