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## The effect of Gentamicin in irrigating solutions on articular infection prophylaxis during arthroscopic ACL reconstruction

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**Purpose:** The purpose of this study was to investigate whether Gentamicin irrigation solutions provide a potential new tool to prevent joint infection after arthroscopic ACL reconstruction.

**Methods:** In this prospective randomized study, 360 consecutive ACL recondition patients were randomized in two groups alternately from Feb 2008 to March 2012. In the first group, 180 patients underwent ACL reconstruction with a hamstring autograft, preoperative IV antibiotics and normal saline (0.9% sodium chloride) solution (group-1). In the second group, 180 patients underwent ACL reconstruction with a hamstring autograft, preoperative IV antibiotics and normal saline (0.9% sodium chloride solution) with added Gentamicin (80 mg/L) (group-2). Three patients from group-1 and six patients from group-2 were excluded from the study due to loss of follow-up. The patients were followed for 6 months and assessed for signs of deep infection.

**Results:** In group-1, a total of 4 (2.2 %) postoperative septic arthritis cases were documented. In group-2, just one postoperative deep infection (septic arthritis) was documented (0.57%). Although the rate of septic arthritis in group-1 was higher than in group-2, statistical analysis showed that the difference between using the Gentamicin irrigation solution (80 mg/L) and the saline solution alone was not significant.

**Conclusions:** Using Gentamicin in irrigating solutions during arthroscopic ACL reconstruction surgery does not statistically decrease post operation septic arthritis.

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