

Free Papers D

[O77] OPEN VERSUS ARTHROSCOPIC TREATMENT OF ACUTE SEPTIC ARTHRITIS OF THE NATIVE KNEE

Brenton Johns¹, Mark Loewenthal², David Dewar¹

¹John Hunter Hospital, New Lambton Heights, Australia

²School of Medicine and Public Health, University of Newcastle (Australia), Callaghan, Australia

Aim: We compared open versus arthroscopic methods as the initial surgical intervention in acute septic arthritis of native knee joints.

Method: At our institution native knee septic arthritis is regarded an orthopaedic emergency and is treated surgically. We conducted a retrospective cohort study. The intervention under study was an arthroscopic versus an open irrigation procedure. The primary outcome was the need to return to the operating theatre for a further procedure. Secondary outcomes were total number of operations required, range of motion (ROM) assessed post-operatively, length of inpatient stay (LOS) and mortality.

All the records of all patients treated at our institution for their episode of native knee septic arthritis diagnosed pre-determined criteria were included. Clinical findings, knee radiographs, and laboratory results including cultures on blood and synovial fluid we collated.

Logistic regression was used to adjust for any effects of severity of infection, co-morbidities, osteoarthritis, or infecting organism.

Results: 161 patients (166 knees) with acute native knee septic arthritis treated between 2000 and 2015 were included. One-hundred and twenty-three knees were initially treated by arthroscopic irrigation and forty-three were treated by open irrigation. Fifty percent of the arthroscopic group compared to 71% of the open group required repeat irrigation (Odds Ratio 2.4). The superiority of an arthroscopic procedure persisted after adjustment for potential confounders with an odds ratio of 2.6 (95% C.I. 1.2 to 6.0, $P = 0.022$). After three irrigation procedures the cumulative success rate was 97% in the arthroscopic group and 83% in the open group ($P = 0.011$). The total number of irrigation procedures required was fewer in the arthroscopic group ($P = 0.010$). In the arthroscopic group mean post-operative range of motion was greater ($P = 0.016$) and median length of stay was shorter ($P = 0.088$). There was no mortality difference.

Conclusions: Arthroscopic treatment for acute native knee septic arthritis was a more successful initial procedure and required fewer total irrigation procedures compared to open treatment. Post-operative range of motion was also significantly greater following arthroscopic treatment.