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ePoster Viewing

Post-surgical and implant infections: from head to knee

POST-ARTHROSCOPIC SEPTIC ARTHRITIS OF THE KNEE. ANALYSIS OF THE OUTCOME AFTER TREATMENT IN A CASE SERIES

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Post operative septic arthritis is an uncommon but potentially severe complication of arthroscopic surgery of the knee.

Methods. In an observational study we included all cases of post arthroscopic septic arthritis of the knee referred during a 5-year period. Septic arthritis was defined by clinical evidences (fever, local pain, erythema or tenderness), laboratory investigations (leukocytosis, increased ESR and CRP), and by synovial fluid leukocyte count of more than $2,5 \times 10^4/\text{microL}$ or positive cultures obtained by synovial fluid aspirate. Empirical therapy was based on drugs active against Gram positive multi-drug resistant bacteria. If bacterial growth was obtained by cultures, antibiotic therapy was based on microbiological evidences. Cure was defined by normalization of clinical and laboratory findings 6 months after antibiotics discontinuation.

Results. 39 patients (median age 25 years, range 17-62, males 77%) with septic arthritis of the knee following arthroscopy were enrolled. Anterior cruciate ligament (ACL) reconstruction was performed in 35 cases, four patients were treated for meniscal and cartilage lesion for degenerative disease. All cases had received pre-operative antibiotic prophylaxis with cephalosporins. 22/39 (56%) cases were observed within 15 days from the surgical procedure and 17/39 (44%) within 30 days. Median synovial fluid leukocyte count was 80710 cells/microL (range 52735-113000). Staphylococcus aureus was identified in 15 (38%) cases (7 methicillin resistant strains), coagulase negative staphylococci in 8 (20%), Enterococcus faecalis in 3 (8%), and Pseudomonas aeruginosa in 2 (5%). No microbiologic evidence was found in 11/39 patients (28%). 33/39 (85%) patients presented with fever and 38/39 (97%) with pain and swelling. CRP was elevated in 37/39 (95%). One patient presented surgical wound dehiscence. 21/39 (54%) patients received arthroscopic debridement followed by antibiotic therapy. No difference in term of outcome was reported in patients undergoing ACL reconstruction treated with debridement in respect to those that did not receive surgery, but pain and swelling resolved within 4 weeks more frequently in those receiving surgery (18/21 vs 9/18, $p < 0.05$). Rifampin was administered in all patients with staphylococcal isolation but 2 patients withdrew the drug because of side effects. Fever disappearance and CRP normalization within 4 weeks was reported more frequently in patients receiving intravenous antibiotic therapy (17/20 vs 9/19, $p < 0.05$). Mean duration of antibiotic therapy was eight weeks (range 6-10). Septic arthritis was cured in all but 3 of 4 cases with degenerative disease received indication to undergo total knee arthroplasty due to sequelae.

Conclusions. We reported the largest series of patients affected by post-arthroscopic septic arthritis of the knee. An early diagnosis and timely treatment with debridement followed by antibiotic therapy may lead to eradication of the infection without sequelae in those undergoing ACL reconstruction. Patients with degenerative disease of the knee undergoing meniscectomy reported poor outcome despite timely administered therapy.