Surgical & Antibiotic management of the infected ACL-R

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Infections after ACL Reconstruction (ACL R) are a potentially serious complication, but they are curable if a proper treatment is performed. For this reason, there is an increased interest in their surgical management and antibiotic treatment. The etiology has been also widely studied. Staphylococci are the most important causative agents in up to 90% of cases. Approximately half of those are due to Coagulase Negative Staphylococci (CNS). Other frequently reported pathogens are *P. acnes* and occasionally *enterococci*, *enterobacteriaceae* and *Pseudomonas* spp.
A diagnosis of septic arthritis should be based on patients' anamnesis and physical examination, laboratory parameters, and cultures of synovial fluid and/or joint tissue.

It is well accepted that treatment of choice is surgical debridement, performed as soon as possible, along with intravenous antibiotic treatment (ABT). Arthroscopic debridement has proven to be the optimal surgical treatment for septic arthritis. More controversial is whether retention of the implant is the best option. However, recent literature shows that it is the treatment of choice when the graft is well fixed and viable. Indeed, it has been also proven that multiple arthroscopic debridements' can be performed when the graft is well fixed and viable.

With regards to the ABT, there are no reported data for the best antibiotic option and its duration. ABT should focus on staphylococci since they cause most of ACL R infections. Even those cases with culture-negative could be treated as staphylococcal infections. Therefore, empiric ABT should be an intravenously delivered wide-spectrum

antibiotic effective against most of the known causative microorganisms. It is obvious that it should be switched out as soon as cultures are available.

The combination of levofloxacin and rifampicin is being proposed as a treatment in cases of an acute staphylococcal infection of an ACLR. An early switch to oral ABT with both levofloxacin and rifampicin for a total (empiric and directed) period of 6 weeks should be considered as treatment of choice in acute staphylococcal infections of the ACLR with a retained graft.