

## Key Session 4

### [O48] OPTIMIZATION OF THE INFECTED PATIENT PRIOR TO SURGERY

Alex Soriano<sup>1</sup>

<sup>1</sup>Department of Infectious Diseases, Hospital Clínic - University of Barcelona, Barcelona, Spain

The incidence of orthopaedic implant infection ranges between 1% and 2.4% for primary joint arthroplasty but significantly increases in revision arthroplasty, open fractures, spinal instrumentation and different subpopulations including patients with rheumatoid arthritis, diabetes mellitus, obese or elderly. Once the patient is infected, in the majority of cases a re-intervention is necessary to obtain a relatively high success rate. These additional interventions have a higher re-infection rate and frequently by multi-drug resistant microorganisms. These infections often occur as a result of a microbial contamination during or immediately after surgery. The development of surgical infection is the result of an imbalance between the burden of contaminating organisms and the host ability to eradicate or control this contamination. According to these facts, it is very important to improve the immune system of the patient taking into account that the treatment of infections cannot be delayed. The lecture will cover those recommendations that have demonstrated a positive impact on the incidence of post-surgical complications. In brief, leukocyte function is essential for winning the battle after wound contamination. Hyperglycaemia, hypoxia and hypothermia are well-recognized factors that reduce the bactericidal activity of leukocytes, therefore, it is necessary to avoid these situations during surgery. To reduce the risk of hyperglycaemia a strict metabolic control in diabetic patients and the identification of potential diabetic patients is important. Stop smoking and treating anaemia with iron therapy or erithropoetin will reduce the risk of tissular hypoxia during surgery. Nutritional status will also impact on the immune system function and wound healing, therefore, methods for identification malnourished patients will be discussed as well as the prevalence among infected patients. A particular aspect in infected patients is that in many occasions they are under antibiotic treatment or have recently received antibiotics reducing the “immunity of colonization” an important concept that will be discussed.