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Editorial

Musculoskeletal infections – A global burden and a new subsection in *Injury*

Osteomyelitis, infected non-unions, septic arthritis, spondylodiscitis, hematogeneous osteomyelitis, implant-associated infections, necrotizing fasciitis, periprosthetic joint infections etc. are different manifestations of musculoskeletal infections. However, they do have one thing in common: each of them put a high burden on the patient, the patient's family, the surgeon and the health care system with frequent fatal consequences, such as severe limitations of the affected limb up to amputations, depression, loss of job and further negative socio-economic consequences for the patient [1–3]. This is particularly true for countries of the developing world but also in highly industrialized countries and, therefore, musculoskeletal infections continue to be a global burden.

In the last decades, key discoveries have been made both in the clinical and in the scientific area in this context. Radical debridement of the infected tissue [4,5] and/or ring fixator techniques relying on the basic concept of Ilizarov [6,7] remain cornerstones in the treatment of bone infections. The acknowledgement of the importance of the surrounding soft tissue envelope and the value of free flap surgery [4,8–10] have helped to improve outcomes together with modern strategies for bone reconstruction summarized in the "Diamond Bone Concept" [11] or in the "Induced Membrane Technique" [12–13] after bone resection [14–18].

From a scientific point of view, the discovery of biofilm formation of many causative microbes by Costeron et al. [19] and the so-called race for the surface by Gristina [20] have broadened our understanding of the pathogenesis of foreign body associated infections. This has enabled us to optimize systemic antibiotic treatment, e.g. with identification of rifampin and some fluorochinolones as antibiotics with anti-biofilm activity, which is of upmost importance in any implant retaining strategy [21,22]. The introduction of the concept of local application of antibiotics in the late seventies [23,24] of the last century with the intention to achieve high concentrations in the wound has been controversially discussed in the past, but newer literature acknowledges its value in the treatment of open fractures and of bone infections [4,25]. Newer developments in the area of antimicrobial coatings of internal implants have shown first promising clinical results but need further evaluation in prospective clinical trials [26].

Despite these developments and improvements, the outcome and the improvement of outcomes in musculoskeletal infections remain moderate [1–3]. The problem is multifactorial and combined efforts are required to improve prophylaxis, surgical treatment, antibiotic treatment and rehabilitation in patients.

Injury has identified infection as an important and unresolved problem and takes its responsibility as one of the leading global journals in trauma care and accident surgery, including post-traumatic sequelae, such as infections, seriously by establishing a dedicated subsection "Infection" in the journal in order to improve the overall quality of life of patients suffering from musculoskeletal infections.

We are looking for manuscripts on the infection topic and hope that we can accomplish, together with you, our goal to reduce and to improve outcomes in musculoskeletal infections. We encourage authors around the globe, including colleagues from the developing world, to share their experiences, results and ideas with the readership of *Injury* on our mission to fight musculoskeletal infections.

Declaration of Competing Interest

None.

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