

Letter to the Editor: New Definition for Periprosthetic Joint Infection

From the Workgroup of the Musculoskeletal Infection Society

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To the Editor:

We wish to draw the attention of the readership of your journal to an issue of widespread clinical importance. Since 2011, when Parvizi *et al.* advocated for, and ultimately delivered, a consensus definition of prosthetic joint infection (PJI) [4, 5], we have seen this consensus definition receiving widespread acceptance within the clinical community [3]. Prior to the availability of this consensus definition, Parvizi *et al.* noted that discrepancies between the numerous definitions of PJI available at that time complicated the interpretation of the clinical literature. After convening a panel of experts, a consensus definition was developed that is currently accepted in the literature as a standard and which has gone on to provide uniformity across studies, improving not only patient care but also the value of clinical research.

The issue we wish to address in this letter is that a large proportion of our infected cases occur in trauma patients with surgically fixed fractures. Infection after fracture fixation (IFF) is one of the most challenging musculoskeletal complications in orthopedic trauma surgery today, yet accurately estimating the impact of this fracture related complication has been hampered by the lack of a clear definition, mirroring the situation for PJI identified over 5 years ago. In contrast to the situation for PJI, there is currently no consensus definition for IFF. Trauma surgeons realize that the definition for PJI can not be extrapolated to IFF and sometimes use the Centers for Disease Control (CDC)-guidelines for surgical site infection (SSI), which distinguishes between superficial, deep and organ/space [2]. Unfortunately, neither the PJI nor the CDC guidelines were specifically developed for fracture patients and critical parameters including presence of the fracture and soft tissue damage are not covered by these definitions. Probably for these reasons, the majority of IFF publications do not mention a definition at all. Interestingly, this issue was already mentioned by Arens *et al.* in 1996 [1], wherein the

authors stated in a combined clinical and experimental study on IFF: *'It is astonishing that in all papers in which infection is mentioned, the term 'infection' is not defined'*.

And so, 5 years on from the publication of a consensus definition of PJI, we believe a better understanding and description of the definition of IFF is urgently required to aid in the routine evaluation of clinical data, as well as aid in the scientific evaluation of medical literature reporting on issues related to IFF. For this reason, we propose a consensus meeting composed of a group of experts who will be asked their opinion on the topic. The outcome of such a meeting should finally lead to a consensus definition for IFF.

References

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