

Editorial

MEASURES IN ORTHOPAEDICS: WHAT, HOW AND WHY?

In a world in which, as shown by today's networks of social and working relations, communication dominates and even determines the way in which we manage our personal lives, we find ourselves continually bombarded with more or less reliable messages that update us on the macroscopic and microscopic reality that surrounds us. In this context, news that claims to be "absolutely true" is often supported by data, or rather figures.

This pattern is more evident when communication purports to become information: we are faced with mountains of figures, which certainly make the news more credible but unfortunately less understandable. In the field of scientific information, this method is a guarantee of quality since no phenomenon (whether presented as personal experience, reproduction or translation of the experiences of others, or evidence of the validity of these experiences) is considered worthy of attention unless it is somehow quantifiable. But what does it mean to measure a phenomenon? It doesn't take much for an experience (or experiment, if we want to remain close to the world of science) to be measurable: an object to be measured, a person to do the measuring, and an instrument through which to perform the measurement. It sounds easy put like that! In actual fact, this simple (or simplified) concept of "measuring" is riddled with pitfalls, especially when the action takes place in a field of investigation as variable, unstable and subjective as medicine. And naturally this includes orthopaedics.

Let us consider, for example, the relationship between the subject doing the measuring and the object being measured. The interaction between these two elements becomes highly variable if they are both human beings subject to a vulnerability (and thus an instability) that is determined, for example, by expectations (personal and reciprocal), frustrations or discomforts that may be related to or independent of the phenomenon that is bringing them together in that specific circumstance. And what about the instrument used to do the measuring? We need to be certain that it really is able to measure, in the same way time after time, the phenomenon that we are investigating. Finally, we have to ask whether we can be sure that what we are seeking to measure really is measurable, or rather quantifiable.

I could write reams about this, but fortunately there is already plenty of literature on this topic and excellent scholars, far more expert than me, who have made it their lives' work to try and clarify, predict and teach us how to limit the mistakes that can be made when measuring a phenomenon in medical research. Instead, I wish to draw the attention of our readers to three of the articles published in this issue of *Joints*, which are excellent examples of how to deal with the problem of measures in orthopaedics.

The first, by Arrigoni et al., is a diagnostic study in which the biceps resisted flexion test (a new test for diagnosing long head of the biceps pathology) is described and analyzed for validity using the arthroscopic diagnosis as the gold standard.

The second, by Blonna et al., analyses the validity and reliability of the SPORTS Score for shoulder instability in a cohort of athletes, using other validated outcome measures as reference standards.

The third, by Boniforti et al., introduces an interesting and innovative measure of short-term outcome after total knee arthroplasty; using the EQ-5D-3L, a self-administered questionnaire, the authors analyzed patients' perceptions of their state of health during the first months following surgery.

Works of this kind often provide interesting reading not just for their contribution to scientific literature, but also because they can provide an experimental model of reference that can be reproduced in future studies having similar objectives. I therefore advise the readers of *Joints* to approach the world of measures with interest and confidence, because it is one of challenge and never-ending discovery.

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