Correspondence on 'Non-surgical and surgical treatments for rotator cuff disease: a pragmatic randomised clinical trial with 2-year follow-up after initial rehabilitation'

With great interest, we read the relevant results of a randomised clinical trial designed to compare conservative and surgical approach for treating rotator cuff disease (RCD), leading cause of shoulder pain and disability in adult's population. The study highlighted the superiority of surgery, by means of shoulder pain (Visual Analogue Scale) and function (Constant Murley Score) improvement after 2 years, in patients with full-thickness rotator cuff tear.[1] Whereas, as already stated in other studies,[2 3] RCD without full-thickness tendon tear benefits equally from either non-surgical treatment or subacromial decompression.

Based on the experience of our hospital, where orthopaedics and rheumatologists work everyday side by side, we would like to make some comments and to share our point of view.

The power of the study lies in the fact that potential eligible patients underwent a systematic adequately performed 3-month rehabilitation, after which only who was still symptomatic was randomised.

The trial was designed in order to distinguish, right from the start, two subgroups in each arm: patients with and without full-thickness ruptures. This was done to evaluate the uncertain role of surgery in patients affected by RCD with full-thickness tear. However, baseline characteristics of the subgroups were not provided. Moreover, in the surgery group, 36 (38%) of 95 shoulders did not undergo surgery due to pain relief, whereas in the non-surgical arm, 12 (13%) of 96 shoulders had to go through surgery due to severe pain. Shoulders not treated per protocol were thus 25%, but it is not known of those, how many had a full-thickness rupture, making more arduous the interpretation of the results based on the intention to treat principle. The outcome was evaluated at 2 years after randomisation, but the timing of surgery varies in each patient during the follow-up period, potentially leading to a bias of the outcome at the fixed timeline. Also, during that time, the authors explicit that the surgery group had a significant higher frequency of physiotherapy visits compared with the non-surgery group, while the non-surgery group received significantly more corticosteroid injections (8%). Both disparities suggest some thoughts. In the first case, it would be interesting to include a socioeconomic perspective and have some data about the impact of surgery in terms of sick leave, amount of physiotherapy needed and recovery time from the procedure. In the second place, corticosteroid may have temporarily silenced the pain potentially altering the outcome measures, if evaluated closely after the injections.

As for surgery techniques, patients with full-thickness tears underwent rotator cuff repair with single-row technique, via either an arthroscopic or mini-open approach; patients without full-thickness tendon tears received arthroscopic subacromial decompression. Yet of the first group, it is not known neither the number nor the compared outcome of who was treated via arthroscopic versus mini-open approach. The different approaches, as documented by several studies, may influence the outcome for certain reasons: the open approach is a more invasive but well-experienced procedure with promising results over the long-term maintenance of an initially successful repair.[4] The latter is opposed to the arthroscopic repair, less-invasive, yet relatively new depending on the years and the surgeon expertise and less constant in maintaining an initially successful repair after several years.[5 6]

This opens to a new consideration, where the duration of the follow-up is a key factor in order to determine the successful outcome. In our recently published study,[6] we presented the long-term results of arthroscopic treatment of RC tears, evaluating possible associations between preoperative factors and RC integrity at final follow-up, at least 10 years later.

At the time of surgery, RC tear size significantly affected supraspinatus integrity at long-term follow-up. In the future, it would be interesting to keep into consideration baseline imaging features of RC tear, as the size, in order to correlate them with the clinical outcome and so to have a prognostic marker and an extra tool at the time of choosing treatment strategy.

In conclusion, according to Cederqvist and coworkers, in the huge part of patients affected by RCD surgery seems not superior to a conservative approach, when stratifying the continuum of RCD, patients with a full-thickness tear seem to significantly benefit from a surgical treatment. These results need further confirmation, an extended follow-up and a fine characterisation of the lesion and the surgical technique performed.

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