Letter to the Editor

Autologous chondrocyte implantation for the treatment of cartilage lesions: randomized control trials assessed in a systematic review

The systematic review (SR) “Effectiveness of autologous chondrocyte implantation in cartilage repair of the knee: a systematic review of controlled trials” highlights how limited and prone to bias is the evidence on a topic as important and of great commercial interest as autologous chondrocyte implantation (ACI). The conclusions reached by Vavken et al. are in line with a recently published SR. This review, which included also studies comparing ACI vs any other treatment and also comparisons between different ACI techniques, concluded that the existing published evidence does not allow conclusions to be drawn regarding the relative effectiveness of ACI compared to other treatments.

We would like to further highlight some characteristics of the included studies, which, to our appreciation, impose further limitation to the magnitude and credibility of the available body of evidence than those acknowledged by Vavken et al.

Nine studies were included in the SR by Vavken et al. However, three pairs of the studies were performed by the same authors; Saris et al. and Horas et al. published two studies each, including the same group of patients. As acknowledged by Vavken et al., the studies by Saris and Knutsen refer to the assessment of the same patients at different follow-up times.

However, the studies by Horas present results for the same group of patients and the same follow-up time. According to Horas et al., response after a letter to the editor that followed their publication in 2003, “the same patient population formed the basis for both the German publication (i.e., Horas 2000) and the present article (i.e., Horas 2003). However, different individual aspects of the treatment’s results were highlighted, especially in the Discussion sections of the two articles”. It is therefore not surprising that Horas 2000 was not included as a separate randomized control trial (RCT) in previously published SRs which also had no language limit, or at least included German publications and it is also not included in the ongoing updated version of the Cochrane SR. Overall, the SR by Vavken et al. does not include nine studies, but six studies published in nine papers. The total sample size is not 561 as stated by Vavken et al., but 441.

The SR by Vasiiliadis et al. evaluated additional sources of bias. The studies were also assessed for baseline differences and selective reporting. Only two studies were found free of these two additional sources of bias. In the remaining items (randomization, allocation concealment, attrition, blinding) there are some differences in the judgments between Vavken et al. and Vasiiliadis et al. This may be partly attributed to the fact that Vasiiliadis et al. contacted the corresponding author of each when additional information was required.

Despite these small differences in methodology, the conclusions of the two reviews are in line. The similarity in findings in these two studies undertaken by two independent teams highlights the urgency to design large randomized trials of low risk of bias with adequately long follow-up to inform about the best treatment available for the full thickness cartilage lesions.

Author contributions

HV substantially contributed to the conception and design, acquisition of data, analysis and interpretation of results and writing the letter.

GS substantially contributed to the conception and design, interpretation of results and writing the letter.

Conflict of interest

None.

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