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Commentary

Commentary to accompany the paper: The quality of systematic reviews addressing peripheral nerve repair and reconstruction



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The authors are to be commended for highlighting the need for further high quality evidence to assist surgical decision making in the management of nerve injuries and for encouraging critical appraisal of available studies. Whilst it cannot be the responsibility of the individual surgeon to undertake randomised control trials (RCTs) and systematically review (SR) all available literature it is our duty of care to ensure our knowledge is best updated and our privilege to safely action innovations in our field. Offer and Perks³ pragmatically discussed the challenges of applying the rigorous requirements of evidence based medicine in our specialty. Their call for action regarding RCTs in those areas where patient numbers are sufficient to adequately power studies has been acted upon, with complete and ongoing RCTs in skin cancer facilitating the development of national guidance and influencing management.² RCTs require significant financial and manpower investment and it is not surprising, that two decades after Sackett et al' pivotal paper on EBM practice⁴ the number of completed high quality RCTs, and subsequently SRs, in a specialty with such varied caseloads is relatively low. AMSTAR is demonstrated here to be a useful tool for the rapid evaluation of SRs that include RCTs and AMSTAR2 allows evaluation of those that include non-RCTs

allowing inclusion of real world observational data.⁵ The Cochrane Collaboration currently provides the most comprehensive systematic review library with expert methodological support available to review authors.

Sun et al. document that the number of SRs on topics pertaining to peripheral nerve repair has risen, reflecting a positive increase in the available RCT evidence, however, find that the quality has not changed. Offer and Perks cite pressure to publish within the trainee cohort as one reason for the lack of high quality level 1 evidence within plastic surgery. Re-evaluating the reward system at national selection to include credit for contribution to multicenter RCTs as equally important as a first author publication will likely improve this alongside the recent drive to publish as collaborative.¹

One common limitation in SR with meta-analysis, not particular to peripheral nerve surgery, is the lack of comparable data and outcome measures used. Agreeing a set of commonly applied outcome measures (*in vivo* and *in humano*) would allow comparison between studies, and should be encouraged by surgical societies and awarding grant bodies.

Furthermore, SRs and meta-analysis tend to be at least 2 years behind the most recent innovations. The future of systematic reviews and meta-analysis may lie in semi-automated integration of new data as it is published, through the power of machine learning. This would of course rely on commonly applied methodologies, outcome measures and data reporting, which is to be encouraged.

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Declaration

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