Retrospective Clinical Studies in Microsurgery – Has the Quality of Reporting changed in the last Two Decades?

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Abstract

Background: Despite initiatives by ASPS to promote evidence-based medicine, the majority clinical plastic surgery research continues to represent low-level evidence. While the level of evidence is important during critical appraisal, the quality of reporting is similarly relevant. Surprisingly, no objective analysis of the quality of reporting of the most common group of studies (i.e. evidence level 4) has been performed to date.(1-4)

Methods: A hand search was conducted including all issues of *Plastic and Reconstructive Surgery, British Journal of Plastic Surgery*, *Journal of Plastic Reconstructive and Aesthetic Surgery*, *Annals of Plastic Surgery*, and *Microsurgery* for the years 1992, 2002, and 2012. All evidence level 4 studies with a focus on microsurgery were included. Parameters of interest included country affiliation of the first author, number of patients, as well as anatomic focus. A modification of an established quality assessment instrument was used for determining the quality of reporting. Scores of <11, 12-21, and 22-32 represented 'poor', 'fair', and 'good' quality of reporting, respectively.

Results: A total of 223 studies were included. A progressive increase in the number of published case series was noted over time (46, 73, and 104 in 1992, 2002, and 2012, respectively). Similarly, an increase in the median number of patients was seen over time (8 [range, 2 - 165], 11 [range, 2 - 660], and 16 [range, 2 - 819] patients in 1992, 2002, and 2012, respectively) (p=0.03). The majority of studies were conducted in Asia (85 studies [38.1 %]) and North America (68 studies [30.5 %]) and predominantly focused on head and neck (68 studies [30.5 %]) as well as lower extremity reconstruction (48 studies [21.5 %]). While the quality of reporting was 'poor' in 1992 and 2002 (median score: 10 [range, 3 – 19] in both years), an improvement to a 'fair' quality of reporting was noted in 2012 (median score: 13 [range, 4 – 24]) (p=0.0001). Of note, it was not until 2012, that studies with 'good' quality of reporting were seen (Figure 1).

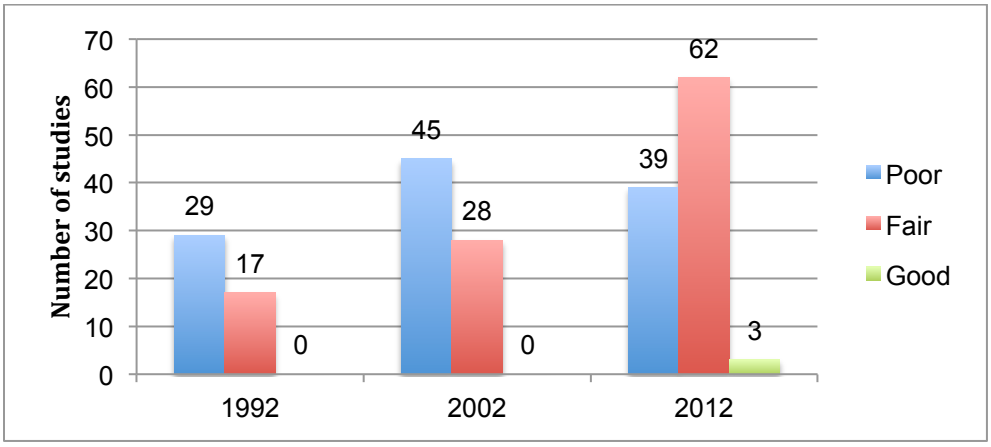

Figure 1. Quality of reporting

Conclusion: The trend to publish an increasing number of case series with a focus on microsurgical reconstruction is paralleled by an improvement in the quality of reporting. Despite this favorable trend, increased efforts to further improve the quality of case series in microsurgery are indicated.

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