

The Quality of Systematic Reviews in Orthognathic Surgery: An Analysis Using AMSTAR

Background:

Systematic reviews constitute the top of the “level-of-evidence pyramid.” Despite their strengths, they have been found to be of varying quality, thus raising concerns about their validity and role in influencing clinical practice. In the present study, a quality analysis of systematic reviews with a focus on orthognathic surgery was performed.

Methods:

A PubMed search was performed to identify all systematic reviews published up to and including December of 2012. Two authors independently reviewed the literature and extracted data from included reviews. Discrepancies were resolved by consensus. Methodologic quality was assessed using AMSTAR, which is an empirically developed instrument for documenting the quality of systematic reviews. AMSTAR is an 11-item measurement tool that assigns a score of 0 or 1 to each criterion, depending on whether it was met. Thus, it generates a score of 0 to 11, with higher values reflecting better methodologic quality. Criteria assessed with AMSTAR are demonstrated in Table 1. AMSTAR scores of 4 or less, 5 to 8, and 9 or greater are considered less than fair, fair to good, and good methodologic quality, respectively.

Results:

The initial search retrieved 251 articles. After screening titles and abstracts, 216 articles were excluded. Full-text review of the remaining 35 articles resulted in further exclusion of 12 articles, leaving 23 systematic reviews for final analysis. Though an increased number of published systematic reviews over time was noted, a median AMSTAR score of 4 indicated the bulk of reviews to be of fair quality.

CONCLUSIONS:

The trend to publish more systematic reviews in orthognathic surgery is paralleled by an increase in the quality of systematic reviews. Nonetheless, increased efforts are indicated to further improve the quality of systematic reviews in orthognathic surgery.