The global prevalence of seroma after abdominoplasty: systematic review and meta-analysis

ABSTRACT

Background: Abdominoplasty is one of the most common cosmetic surgeries performed worldwide. Seroma is also the most common local complication associated with abdominoplasty, which increases care costs, reduces patient satisfaction, and has serious complications for patients. Results of previous studies report different levels of seroma prevalence after abdominoplasty. The aim of this study is to standardize the statistics of the prevalence of seroma after abdominoplasty using meta-analysis. Methods: In this systematic review and meta-analysis study, data from studies conducted on the global prevalence of seroma after abdominoplasty was extracted using the keywords "Prevalence, Epidemiology, Complications, Abdominoplasty, Seroma, and Lipo abdominoplasty" in the databases of Science, Scientific Information Database, MagIran, Embase, Scopus, PubMed, Web of Science, and Google Scholar search engine without time limit until October 2020. The random-effects model was used to analyze the eligible studies, and the heterogeneity of the studies was investigated with the I2 index. Data analysis was performed using Comprehensive Meta-Analysis software (Version 2). Results: In reviewing 143 studies (five studies related to Asia, 55 studies related to Europe, three studies related to Africa, and 80 studies related to the Americas) with a total sample size of 27834 individuals, the global prevalence of seroma after abdominoplasty was obtained as 10.9% (95% CI: 9.3-3.6.6%) and the highest prevalence of seroma was related to the Europe continent with 12.8% (95% CI: 10.15-3.9%). The results from meta-regression showed a declining trend in the global prevalence of seroma after abdominoplasty with an increase in the sample size, age of study participants, and the year of study ($p < 0.05$). Conclusions: This study shows that the prevalence of seroma after abdominoplasty is high globally. Therefore, physicians and specialists must consider its importance and take the controlling and treatment measures seriously. Level of evidence iii: This journal requires that authors assign a level of evidence to each article. For a full description of these Evidence-Based Medicine Ratings, please refer to Table of Contents or online Instructions to Authors www.springer.com/00266 .

Keyword: Seroma; Abdominoplasty; Systematic review; Meta-analysis