The association between surgeon case volume and hospitalization costs in free flap oral cancer reconstruction operations

李信謙

Lin CS;Lee HC;Lin CT;Lin HC

摘要

Abstract

Background: Although inverse volume-cost relationships have been reported for many major surgical procedures, such relationships remain unexplored in the field of microsurgery for oral cancer reconstruction. This study therefore was conducted to confirm, or refute, the hypothesis that higher surgeon volume is associated with better economic outcomes in free-flap operations for oral cancer reconstruction. Methods: From a population-based data set covering the years 2002 to 2003, the authors selected a total of 2325 oral cancer patients who had undergone free-flap operations. These were then divided into four roughly equivalent surgeon volume groups consisting of less than or equal to 12 cases (low volume), 13 to 29 cases (medium volume), 30 to 65 cases (high volume), and greater than or equal to 66 cases (very high volume). Hierarchical linear regression analysis was subsequently performed to examine the relationship between surgeon case volume and hospitalization costs. Results: The mean hospitalization costs among the 2325 patients were $9879 (all costs are given in U.S. dollars); however, after adjusting for physician, hospital, and patient characteristics, the costs per patient for low-volume surgeons were found to be $995 ($p = 0.001$) higher than those for high-volume surgeons, and $2138 ($p < 0.001$) higher than those for very-high-volume surgeons. The difference between medium- and low-volume surgeons was not significant. Conclusion: The authors conclude that after adjusting for physician, hospital, and patient characteristics, low-volume surgeons performing free-flap operations for oral cancer reconstruction incurred significantly higher costs per patient than high-volume or very-high-volume surgeons.