Microsurgical Reconstruction of the Oral Cavity with Free Flaps from the Anterolateral Thigh and Radial Forearm: Example of Confounding by Indication?

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TO THE EDITORS:

With great interest, we read the article “Microsurgical reconstruction of the oral cavity with free flaps from the anterolateral thigh and radial forearm: a comparison of perioperative data from 161 cases” by Kesting et al.¹

In the article, the authors report their experience with the application of the radial forearm free flap (RFFF) and the anterolateral thigh free flap (ALTFF) for soft tissue reconstructions in the head and neck region. In the “Methods” section, the authors explain that the choice for a RFFF was determined by clinical variables such as weight (men > 100 kg and women > 80 kg), as well as peripheral arterial occlusive diseases or stenosis of the carotid artery. The ALTFF was preferably used for composite defects in which primary reconstruction was not possible.

In the “Results” section, the authors report that the frequency of donor-site morbidity was significantly higher in the RFFF group (9.5%) compared with the ALTFF group (0%). This difference could be related to either the poor health of the overweight patient, or the poor vascular state of the patient, which might not be restricted to the carotid artery. These findings are, in our opinion, an

example of confounding by indication. The reader is not informed about an analysis that relates donor-site morbidity to weight and/or the general and specific vascular state of the patient, which in our opinion would have been clinically as well as scientifically relevant.

Additionally, a longer operation time and a larger flap size may not necessarily be related to the use of the ALTFF itself but to the defect characteristics, such as size and site. It is very likely that larger defects need longer operation time and larger flaps. This is, in our view, a conclusion that seems quite logical, and likely to be drawn without the necessity for statistical testing. A regression analysis with surgical time as dependent variable and defect size and site, comorbidity, and weight of the patient, and possibly skill of the surgeon, might have been a more appropriate approach, if the data fulfill the assumptions needed for this type of analysis.

REFERENCES

1. Kesting MR, Hölzle F, Wales C, et al. Microsurgical reconstruction of the oral cavity with free flaps from the anterolateral thigh and radial forearm: a comparison of perioperative data from 161 cases. *Ann Surg Oncol*. 2011;18: 1988–94.