

A Multicenter, Randomized, Controlled Trial of a Patient-Centered Educational Handout for Head and Neck Microvascular Reconstruction

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Importance:

- Patient education is an important aspect of surgical practice that facilitates shared decision making, informed consent, and patient satisfaction.
- Head and neck microvascular reconstruction is a complex procedure that is performed on patients with a variety of socio-economic and educational backgrounds, making patient education challenging.
- There is a need for patient-centered educational materials with proven effectiveness in explaining head and neck microvascular reconstruction.

Objective:

- (1) To determine whether a patient centered educational handout improves comprehension and reduces anxiety in patients undergoing head and neck microvascular reconstruction.
- (2) To determine the impact of factors such as educational attainment and health literacy on the process of patient education.

Methods:

We conducted a multicenter, randomized, controlled trial comparing patient education supplemented by a patient-centered educational handout to standard verbal education in 138 patients planning to undergo head and neck microvascular reconstruction.

Patients were enrolled at four academic medical centers from December, 2017 until April, 2019.

Methods (cont):

- The primary outcome measure was performance on a 10 question quiz regarding the procedure and perioperative course. The secondary outcome was anxiety as measured by the Amsterdam Perioperative Anxiety and Information Scale (APAIS).
- Demographic data and the score on the Brief Health Literacy Screen (BHLS) were also recorded. A generalized linear model was used to analyze the impact of the educational handout on quiz performance while controlling for possible confounding variables

Patient Centered Handout Figures

Figure 1

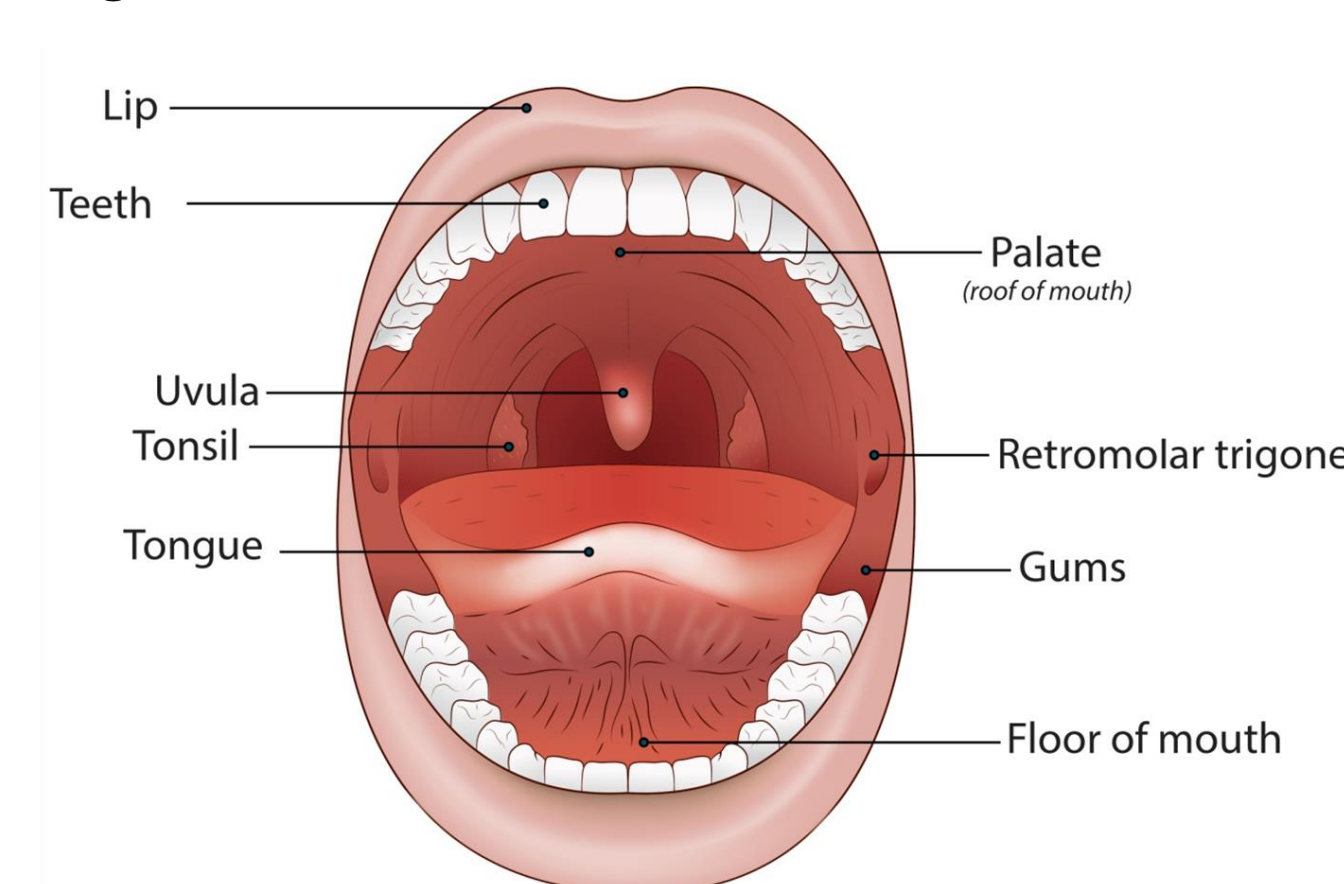


Figure 3

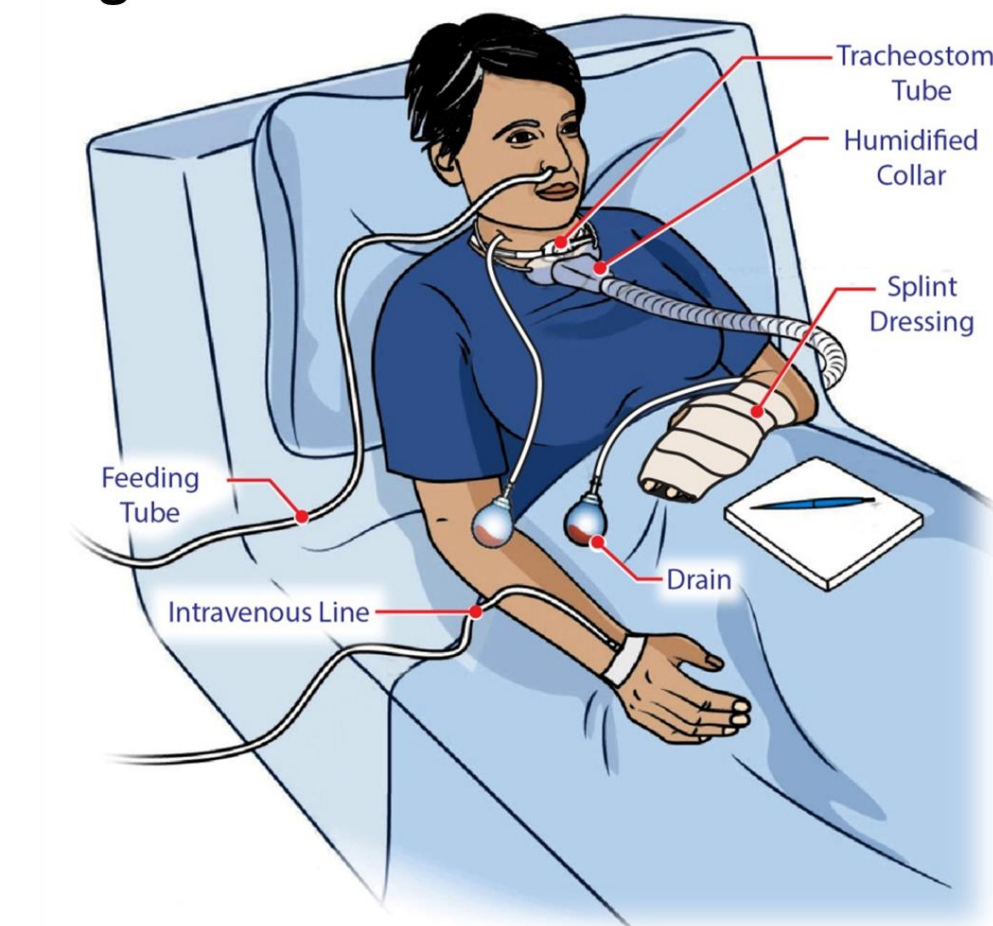


Figure 2

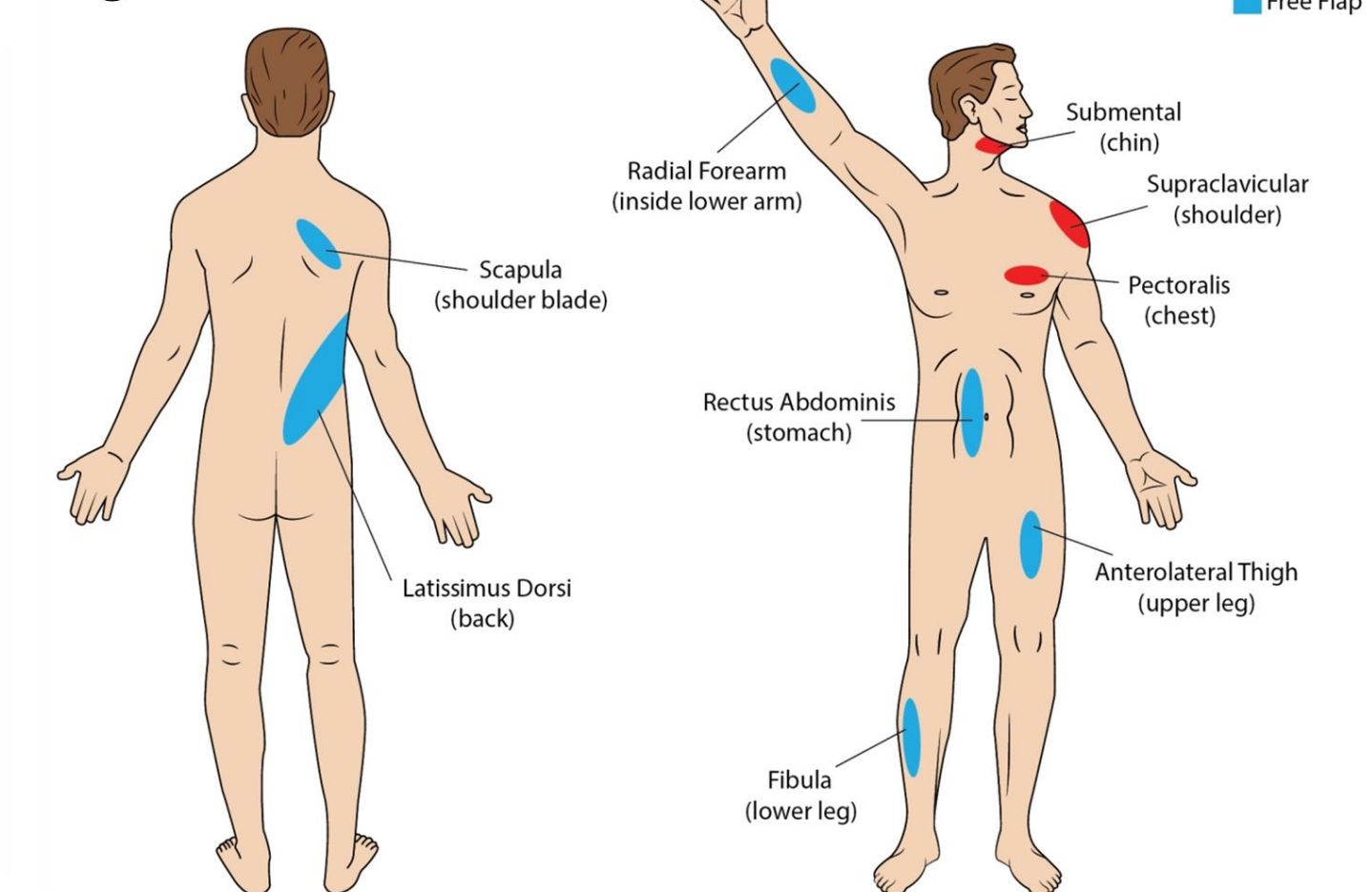
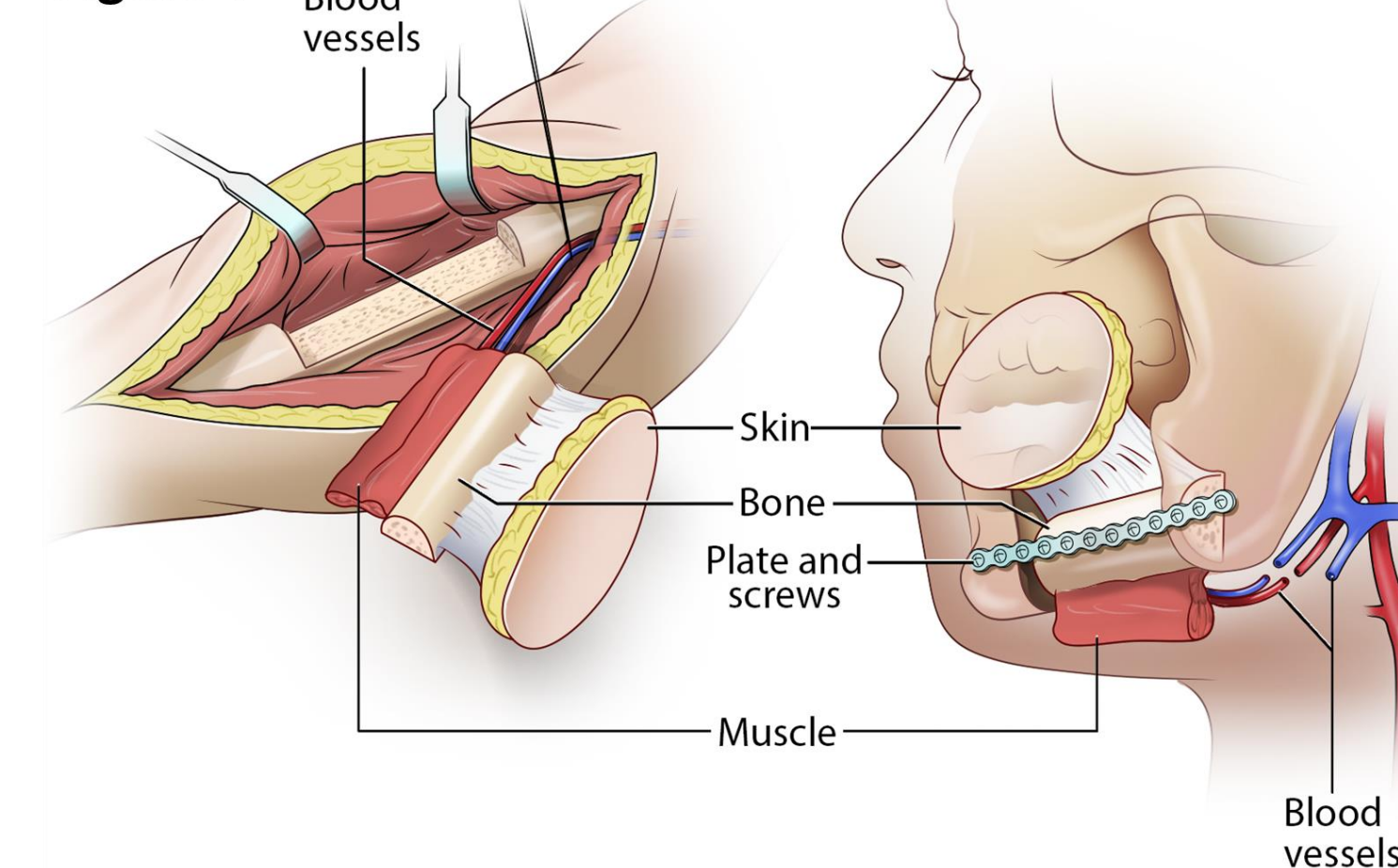


Figure 4



Results:

- Baseline characteristics were not significantly different between the two groups.
- The median quiz score for patients who received education supplemented by the handout was 9 out of 10 correct (interquartile range (IQR) 8-10) versus 8 out of 10 (IQR 7-9) for patients who received standard verbal education ($p = .031$).
- Anxiety as measured by the APAIS was not significantly different between the two groups.
- Multivariate analysis found that only implementation of the educational handout increased quiz scores (12% improvement, 95% CI: 2%-24%, $p=.021$); while sex, income, employment, education, age, and health literacy did not significantly impact quiz performance.
- In this cohort, 53% of patients had a high school education or less and 46% of patients had limited health literacy as defined by a score of 9 or less on the BHLS.

Conclusions:

- Use of a patient-centered handout caused a small but significant improvement in patient comprehension of head and neck microvascular reconstruction.
- Many patients undergoing this procedure have limited educational attainment and limited health literacy, making patient education more challenging.
- Further research is needed into how to personalize education to individual patients to meet their specific desires and needs.