The Role of Ancillary Cosmetic Procedures in Facial Reanimation Surgery

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**INTRODUCTION**

Facial reanimation surgery entails a complex set of procedures that aims to restore patients to their pre-paralyzed appearance and function. This study examines the addition of cosmetic ancillary procedures to traditional techniques used in facial paralysis reanimation surgery. Outcomes in patients undergoing reanimation procedures alone versus those receiving cosmetic ancillary procedures is examined to assess if the addition of these procedures improves symmetry and function.

**METHODS AND MATERIALS**

Institutional review board approval was obtained from our institution. Thirty patients were included who underwent facial paralysis reanimation surgery and those who underwent cosmetic procedures in addition to facial reanimation surgery. Traditional facial reanimation procedures were performed based on individual patient needs and whether paralysis was partial or complete. An outcomes questionnaire was employed between the two groups, pre-operatively and at 6 months post-operatively.

**RESULTS**

Preoperative comparisons between patients receiving facial reanimation surgery alone and those receiving ancillary procedures showed similar outcomes with regard to difficulty with smile, concern over smile in public, worry over social situations, oral competence, and articulation. Post-operative comparisons between these two groups showed statistical significance between attitudes regarding appearance of the face as a whole, illustrating that those patients receiving ancillary procedures in addition to facial reanimation surgery responded more favorably. In addition, patients receiving ancillary procedures showed increased satisfaction with smiling in public, attending social events, articulation, and smile symmetry. Moreover, regarding oral competence and public eating, those responses approached significance between the two groups.

**DISCUSSION**

Facial reanimation surgery entails a wide variety of procedures used to achieve improved function and symmetry, the goal being to restore patients to their pre-paralyzed state. Success is often related to patient perspective. Therefore, attitudes toward the patient’s paralysis and its limitations are vital to understand, in order to ascertain a reasonable and favorable outcome for physician and patient. Thirty patients from Indiana University were selected who underwent facial reanimation surgery, which includes nasal valve repair, temporalis tendon transfer, platinum chain insertion/revision. A subset of these patients also received ancillary cosmetic procedures including facelift, platysmaplasty, brow lift, and fat transfer. One of the main goals of facial reanimation surgery is to restore symmetry and this study looked at the effectiveness of adding cosmetic ancillary procedures to achieve this goal. By adding ancillary cosmetic procedures, we have shown that the goal is better achieved to a significant degree. Patients responded more favorably to aspects of their overall appearance, as well as smile, which is often the most noticeable aspect of the paralysis. Moreover, articulation was improved as well as reduced worry in social situations. Of note, oral competence seemed to be unaffected by the addition of ancillary cosmetic procedures. This fact is most likely due to the nature of the ancillary procedures, which affected the SMAS and upper brow position. The oral commissure is often addressed with more classic procedures such as nerve and tendon transfer.

**CONCLUSIONS**

The data supports implementing cosmetic procedures at the time of facial reanimation. Patients receiving ancillary cosmetic procedures have statistically improved outcomes as compared to their facial reanimation surgery counterparts.
Facial Reanimation Outcomes Questionnaire

A. Level of Difficulty PRIOR to surgery
1. Did you have difficulty with your ability to smile?
2. Did you worry about smiling in public?
3. Did you worry about attending social events because of your appearance?
4. Did your lip pull to the non-paralyzed side?
5. Did you have difficulty holding food/liquid in your mouth?
6. Did you worry about eating in public?
7. Did you have difficulty speaking clearly?

B. Abilities NOW compared to before surgery
1. How do you feel about the appearance of your face?
2. How do you feel about your ability to smile now?
3. How do you feel about smiling in public?
4. How do you feel about attending social events?
5. How do you feel about your ability to hold food/liquids in your mouth?
6. How do you feel about eating in public?
7. How do you feel about your ability to speak clearly?
8. How would you rate the symmetry of your smile?