

# Abstract #1082.docx

## DOES BARIATRIC SURGERY IMPACT THE SELF-PERCEIVED OUTCOME OF CERVICAL SPINE SURGERY?

### Introduction/Aim

The epidemic of obesity and morbid obesity in the United States is well publicized. As a result, the number of patients having bariatric surgery has steadily grown to occur in estimate of what 150,000 per year. We have seen an increased number of patients at our spine clinic who have had previous bariatric surgery. We sought to study its impact on the patient's self-perceived clinical outcome of elective cervical spine surgery.

### Materials and Methods

We reviewed all patients at our institution from 01/01/2009 through 12/30/2010. Of 8,132 patients who had signed the research registry, 211 had had bariatric surgery. Of these 211, 88 had had elective spine surgery. Of those, 18 had had cervical spine surgery, and they comprise the primary study group. We matched to age, gender, height, weight, BMI, type of surgery, diagnosis, and comorbidities as close as possible. We looked at a global Odom's score from a chart review. We looked at the average one-year follow-up and used the data available to calculate a delta NDI, delta VAS neck pain, and delta VAS arm pain.

### Results

| <u>ODOM's</u> | <u>Bariatric (18)</u> | <u>Match (18)</u> |
|---------------|-----------------------|-------------------|
| Excellent     | 3                     | 6                 |
| Good          | 11                    | 9                 |
| Fair          | 1                     | 3                 |
| Poor          | 3                     | 0                 |
|               | } 78%                 | } 83%             |
|               | } 22%                 | } 17%             |

| <u>DELTA NDI</u> | <u>Bariatric (15)</u> | <u>Match (17)</u> |
|------------------|-----------------------|-------------------|
| Worse            | 2                     | 1                 |
| 0-19             | 7                     | 6                 |
| 20-34            | 5                     | 6                 |
| 35-58            | 1                     | 5                 |
|                  | } 40%                 | } 65%             |

| <u>DELTA VAS NECK</u> | <u>Bariatric (14)</u> | <u>Match (18)</u> |
|-----------------------|-----------------------|-------------------|
|                       | # Avg. Points         | # Avg. Points     |
| Worse                 | 3 1.5                 | 1 6               |
| Same                  | 1 0                   | 3 0               |
| Better                | 10 4.7                | 14 5.4            |

| <b><u>DELTA VAS ARM</u></b> | <b><u>Bariatric (14)</u></b> |                    | <b><u>Match (17)</u></b> |                    |
|-----------------------------|------------------------------|--------------------|--------------------------|--------------------|
|                             | <b>#</b>                     | <b>Avg. Points</b> | <b>#</b>                 | <b>Avg. Points</b> |
| Worse                       | 3                            | 3.7                | 0                        | 0                  |
| Same                        | 2                            | 0                  | 3                        | 0                  |
| Better                      | 9                            | 4.9                | 14                       | 4.8                |

### **Discussion**

While the number having had cervical spine surgery limits the statistical assessment, the global assessment by the clinicians Odom's is that patients with bariatric surgery do as well as a match cohort. However, when looking at the individual details of self-rated decreased pain and improved function by the patients, the matched cohort seems to have a higher percentage of patients reporting higher levels of self-perceived improvement.

### **Conclusion**

Our review suggests that in managing the expectations of patients, these numbers may lead one to advise those who have had bariatric surgery that there is a potential for a diminished self-perceived outcome as measured by the VAS and NDI when undergoing elective cervical spine surgery. Our intention is to follow and obtain a larger sample size.