INTRODUCTION

Body Mass Index (BMI) and other patient factors that influence parotidectomy complications have been studied extensively. However, there is a lack of literature specifically addressing the relationship between BMI and parotidectomy complications. This study aimed to determine if BMI influences the outcomes of patients undergoing parotidectomy and to identify other factors that may influence patient outcomes.

METHODS AND MATERIALS

The operative records of all patients from 2007-2012 were reviewed in the Department of Otolaryngology Head and Neck Surgery. A Retrospective consecutive series of patients treated with a parotidectomy were reviewed. Patients who underwent any form of parotidectomy including superficial and total parotidectomy were included. Patients who underwent parotidectomy in conjunction with other surgical procedures such as neck dissection or mastoidectomy were excluded.

Complications were split into several categories including facial nerve weakness, hematoma, infection, and other complications. The complications were also broken into early and late complications. Early complications were defined as any complications occurring directly after surgery to post-operative day thirty. Late complications were defined as those complications occurring or persisting beyond post-operative day thirty. Patient variables used in the study included BMI, age, gender, and diabetes. Fischer’s exact test statistical analysis was used to determine the differences among the cases.

RESULTS

The study group consisted of 255 parotidectomies that took place between 2007 and 2012 at one university hospital performed by 8 different surgeons. Of the cases that were included in the study, 225 were superficial parotidectomies (88%) and 30 were total parotidectomies (12%). The average BMI for these patients was 27.96 (standard deviation = 6.32), which was not significantly different from the excluded cases (average BMI = 28.85, n=110, p=0.22). The characteristics of the study’s patient population according to BMI are summarized in Chart 1. Also, of note, 8% of included patients were noted to have diabetes in their chart (n=21).

There were significantly more perioperative complications (p=0.0473) early and later, following total parotidectomies (76.67%) as compared to superficial parotidectomies (57.78%). Total parotidectomies also had a significant correlation with a higher rate of facial nerve dysfunction (p=0.0194) and late wound infections (p=0.0147).

Only 25% of patients, however, had any nerve dysfunction that persisted beyond thirty days. Most of these were mild marginal weakness.

DISCUSSION

Our study showed a breakdown of about one third of patients in the normal BMI range, about one third of patients in the overweight category and about one third of patients in either the obese or morbidly obese category. This seems to be slightly higher than some literature in other specialties.

This study also showed a significant relationship between perioperative complications and those patients with diabetes. Patients with diabetes were found to have a higher incidence of facial nerve weakness, which corroborates the findings of Yuan et al, who examined 626 conservative parotidectomies for benign disease and found that diabetes mellitus was a significant risk factor for transient facial palsy.

Results from this study were consistent with the results from other authors regarding the relationship between the type of surgery and the rate of post-operative complications. Study results showed that overall complication rates following total parotidectomies were higher (76.67%) than the complication rates following superficial parotidectomies (57.78%). As in previous studies, there was a significantly higher rate of facial nerve dysfunction following total parotidectomies. Much of the nerve weakness was transient and resolved within the first few weeks. As it takes more dissection and stretching of the nerve to complete a total parotidectomy we would anticipate a higher rate of nerve weakness.

CONCLUSIONS

This is a large retrospective study looking specifically at BMI and patient characteristics to determine likelihood of complications. BMI was not found to effect patient outcomes when undergoing a parotidectomy. Patients with diabetes and those undergoing a total parotidectomy do have a significantly increased risk of facial nerve weakness. The high facial nerve weakness noted in this study overall is likely a result of immediate assessment and inclusion of any minor weakness. As this procedure is performed by most otolaryngologists and it represents a typical population, it can be useful for the surgeon in the counseling of patients.

REFERENCES