Use of PTH Assay after Thyroidectomy: A US Surgeon Survey Analysis

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INTRODUCTION

Hypocalcemia is a common problem after thyroid surgery that can result in postoperative complications and urban centers. Although the prevalence of hypocalcemia varies, the incidence of hypocalcemia following total or completion thyroidectomy has been documented as high as 40% for transient and 15% for permanent hypocalcemia. Traditionally, predicting this common complication and its sequelae has been achieved by following calcium trends every 6-12 hours to 24-48 hours to allow for levels to plateau.

Since 2002, numerous studies have shown thatPTH assay, checked minutes to hours after completing thyroid surgery, is excellent in predicting those patients who will become hypocalcemic.

METHODS

OBJECTIVES: The objectives of the present study were (1) to evaluate if type of training or any specific demographic number of thyroids performed, but not with age, practice type or type of surgery.

METHODS: An anonymous response survey was sent from 2002 to 2008 to members of the American Academy of Otolaryngology-Head and Neck Surgery (AAOS) and The American Academy of Endocrine Surgeons (AAES). Electronic copies of the survey were provided by the online survey service, Survey Monkey. These surveys were distributed via email blast to AAOS surgeons and via online newsletter format to AAES surgeons. The survey was forwarded below over a period of time from March 2002 to May 2005. In addition to the electronic survey, an additional paper copy of the survey was submitted to 100 hospitals as a single instructional course at the AAOS-HNS Academy Meeting in 2006.

No protected health information was collected and writings were executed by either email or fax. Approval for this study was obtained from the Institutional Review Board.

RESULTS

Over 12,000 resident and staff surgeons were surveyed. There were 291 respondents (response rate = 2%). There were no significant associations with self-reported postoperative hospitalization or calcium supplementation and likelihood of utilizing the PTH assay. Training type, use of the PTH assay, surgeon experience and routine calcium supplementation are also significantly associated with shorter post-operative hospitalization.

CONCLUSIONS

It is well established that one of the foremost complications of thyroid surgery is the development of hypocalcemia. Traditionally, this complication has been monitored for and managed using patient symptoms and serum calcium levels. Within the last decade, the use of parathyroid hormone assay has gained credibility as a reliable tool to predict postoperative hypocalcemia within hours of total or completion thyroidectomy.

It was determined through a polling of the audience during a lecture given at the 2008 American Academy of Otolaryngology – Head and Neck Surgery annual meeting that only about 4.5% of the surgeons in the audience utilize the PTH assay postoperatively. Thus, it was surmised that the survey seek to determine what further information regarding the use of the PTH assay is necessary to alter current management trend.

We compared physician training and likelihood of utilizing the PTH assay. The findings in this study would not be complete without an acknowledgment of weaknesses, primarily noting that the survey study design is biased by self-reported data and may be limited by the time constraints on surgeons.

REFERENCES