

Annol Chattha, BA¹; Alexandra Bucknor, MBBS, MRCS, MSc¹; Austin D. Chen¹; Marc L. Schermerhorn, MD²; Bernard T Lee, MD, MBA, MPH¹; Samuel J. Lin, MD, MBA¹

¹ Division of Plastic and Reconstructive Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA

² Division of Vascular and Endovascular Surgery, Beth Israel Deaconess Medical Center, Harvard Medical School, Boston, MA, USA

BACKGROUND

Rhytidectomy is the 7th most common aesthetic surgery procedure performed in 2015, with 127,297 cases.

Given that those born between 1946 and 1964 constitute 28% of the US population and 76 million Boomers will reach 65 over the next two decades, it becomes more important now to define the safety profile of a rhytidectomy in the elderly.

OBJECTIVE

We aim to evaluate complication rates and risk factors in those over 65 years of age undergoing rhytidectomy, as compared with a younger cohort.

METHODS

Patients

- Healthcare Cost and Utilization Project (HCUP) National Inpatient Sample (NIS) database from 2009-2012 using ICD-9 code: 86.82
- Age was recorded as (1) age \geq 70 years / < 70 years and (2) age \geq 75 years / < 75 years

Variables

- Major complications and hematoma formation;
- Major complications defined as myocardial infarction, pulmonary embolism, respiratory failure, stroke, deep venous thrombosis and \geq mortality.

Statistical analyses

- Multivariate logistic regression
- 95% confidence intervals (CI) presented
- Significance at $p < 0.05$

RESULTS

Patient Characteristics

A total of 6964 patients underwent rhytidectomy. Of these, 2,215 (31.8 percent) were aged 65 and older and 4,749 (68.2 percent) were younger than 65 years.

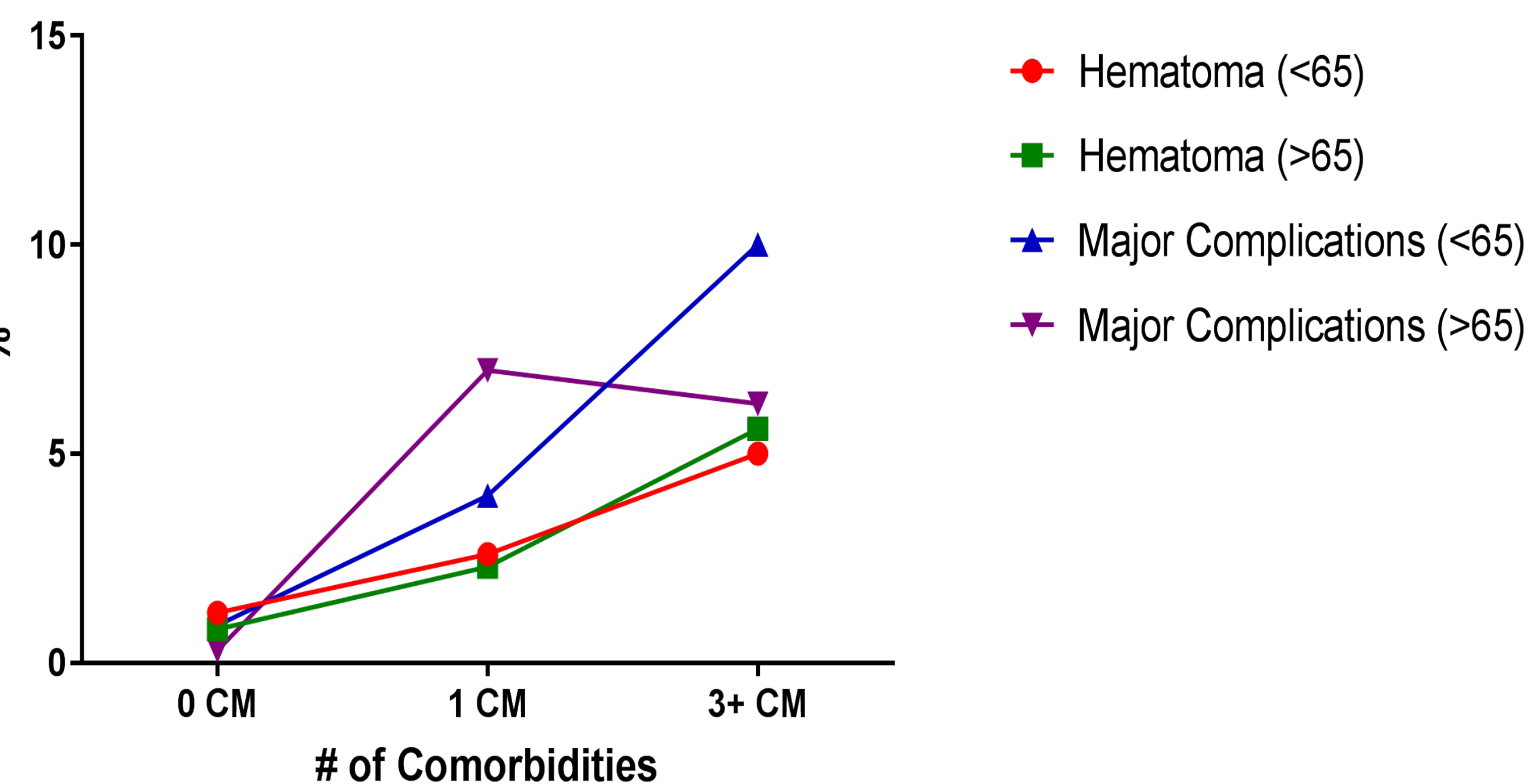
Major Complications

A total of 177 major complications occurred (2.5 percent), of which 75 were in the patients aged 65 years and older (3.4 percent) and 102 were in patients younger than 65 years (2.1 percent, $p = 0.002$).

Independent Risk Factors (Major Complications)

- Age 70+ (adjusted OR 1.771, CI 1.081-2.903);
- Male sex (adjusted OR 5.816, CI, 3.554-9.518);
- Hypertension (adjusted OR 5.120, CI 2.960-8.856);
- Diabetes mellitus (adjusted OR, 3.272, CI 1.517-7.061)

Complication rates vs. Comorbidities



RESULTS (cont.)

Hematoma

A total of 120 hematomas occurred postoperatively (1.7 percent), of which 38 were in the patients aged 65 years and older (1.7 percent) and 82 were in patients younger than 65 years (1.7 percent, $p < 0.974$).

Independent Risk Factors (Hematoma)

- Male sex (adjusted OR 3.238, CI 1.634-6.416)
- 3+ comorbidities (adjusted OR 3.239, CI, 1.429-7.339).

CONCLUSION

- Inpatient rhytidectomy has a low overall major complication rate; however, there were significantly more major complications occurring in those over 65.
- When analyzing a healthy cohort with no comorbidities, there is no significant difference in major complications.
- In patients aged 65 and older, an advanced age $>$ 70, hypertension, diabetes mellitus, and male sex are independent risk factors for major complications.
- In these same older patients, male sex and having greater than three comorbidities were independent predictors for hematoma formation.
- Proper counseling of preoperative risk factors should be considered to help stratify high risk patients that might be better suited for non-surgical facial rejuvenation options.