The Effect of Pre-operative Coumadin Therapy on Patients Who Develop Hemorrhagic Events Post Bariatric Surgery

Richard Boorse MD
Richard.Boorse@lvhn.org

Peter J. Bechtel MD
Peter_J.Bechtel@lvhn.org

Cathleen Webber RN, MSHS
Cathleen.Webber@lvhn.org

Suzanne L. Smith MBA, RRT, TAS
Lehigh Valley Health Network, Suzanne.Smith@lvhn.org

Cathy Fuhrman RN, MSN
Cathy.Fuhrman@lvhn.org

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Background

- Lehigh Valley Hospital Health Network (LVHN), a non-profit tertiary care facility in Allentown, Pennsylvania is a Level 1 accredited Bariatric Surgery Center performing over 375 procedures annually.
- LVHN joined the American College of Surgeons National Surgical Quality Improvement Program (ACNSQIP) in May 2006.
- The Agency for Healthcare Research and Quality (AHRQ) estimates that 2 million patients are managed on Coumadin or other anticoagulants yearly.
- As the incidence of obesity in America continues to increase, the number of patients undergoing weight loss procedures is concurrently rising (16,000 surgeries performed annually in 1990 climbed to about 140,000 in 2005).
- Patients on chronic anticoagulant therapy who undergo bariatric surgery represent a unique patient population.
- In our institution, the practice pattern had been to return patients to their pre-operative anticoagulation regime at the time of discharge following bariatric surgery.
- We evaluated patients on pre-operative anticoagulation undergoing bariatric surgical procedures who developed hemorrhagic complications.

Methods

- A retrospective chart review was performed on all LVHN bariatric surgery cases entered into the American College of Surgeons Bariatric Surgery Center Network (ACSBSCN) database from 4/1/2008-9/30/2011.
- Patients identified as being on pre-operative Coumadin or Antiplatelet therapy.
- Our data demonstrated a baseline 9.9% readmission rate for our entire population (n=1338). Of readmissions, 18.8% (n=25) were readmitted for bleeding symptoms. In the Coumadin/Antiplatelet population (n=43), a baseline readmission rate of 32.6% was observed. In 71.4% of these cases (n=10), bleeding symptoms were the cause for re-presentation. Intra-luminal bleeding pervaded as the most frequent expression of hemorrhage.

Results

- Patient population
  - 1338 patients underwent bariatric surgery
    - 43 were on Coumadin or Antiplatelet therapy
  - 133 patients were readmitted
    - 25 patients were diagnosed with post-operative hemorrhage
    - 10 of 25 were patients on pre-op anticoagulation/antiplatelet therapy

Discussion

- We identified a trend toward post-operative coagulopathy as captured by readmission rate.
- There is no defined explanation for the development of post-operative coagulopathy in this population. Potential causes are drug interaction, diet modification, body habitus change.
- These hypotheses have not been tested. The investigators have initiated a follow-up study to acquire data to this purpose.

Summary

- Based on our preliminary findings, we recommend discharging patients on decreased Coumadin dose, checking INR within 48-72 hours of discharge, and vigilant INR monitoring for several weeks post-operatively.

Conclusion

- The Effect of Pre-operative Coumadin Therapy on Patients who Develop Hemorrhagic Events Post Bariatric Surgery

Boorse, Richard, MD; Bechtel, Peter, MD; Webber, Cathleen, RN, MSHS; Smith, Suzanne, RRT, MBA; Fuhrman,Cathy, RN, MSN
Lehigh Valley Health Network, Allentown, Pennsylvania