



COMPLICATIONS AFTER SURGICAL TREATMENT OF BENIGN BONE TUMORS

UC San Diego Health

Matthew Henriques, MD¹, Frank Chiarappa, MD², James Flint, MD¹

¹Department of Orthopaedic Surgery, Naval Medical Center San Diego, CA

²Department of Orthopaedic Surgery, University of California San Diego, CA

BACKGROUND

Patients frequently present to orthopaedic surgeons for further evaluation of bony lesions, either discovered incidentally or secondary to symptom progression. Given the wide prevalence and perceived low risk of surgical treatment, these lesions are often excised. The current literature is lacking in consolidated reporting of postoperative complication rates following these procedures.

QUESTIONS/PURPOSE

What are the the 30-day postoperative complication rates following excision of benign bone tumors? How can this allow the physician to more completely counsel patients and guide decision-making in the surgical treatment of these lesions?

METHODS

Participant User Files (PUF) were obtained from the American College of Surgeons (ACS) National Surgical Quality Improvement Program (NSQIP), utilizing database files from 2014-2018. These were then filtered by Current Procedure Terminology (CPT) codes to capture the most common procedures, while avoiding overlap with malignant tumor surgery. Inclusion criteria were extremity location and all codes including treatment of "bone cyst or benign tumor." Exclusion criteria were non-extremity location, infection, pseudotumors, open biopsy, radical/wide resection. 2,552 cases were included, representing 0.05% of the total database. The included procedures were then evaluated for their corresponding complication rates. Primary outcome measures were 30-day unplanned readmission, superficial and deep surgical site infections, wound dehiscence, unplanned reoperation, deep venous thrombosis (DVT), pulmonary embolism (PE), stroke/cerebrovascular accident (CVA), myocardial infarction (MI) and cardiac arrest, bleeding requiring transfusion, and death.

RESULTS

NSQIP reported 30-day postoperative outcome measures for cases that met inclusion, as seen below in Table 1. This yielded a mean complication rate of 0.98% for all included procedures. None of the patients with death reported within 30 days were directly attributable to the surgical procedure.

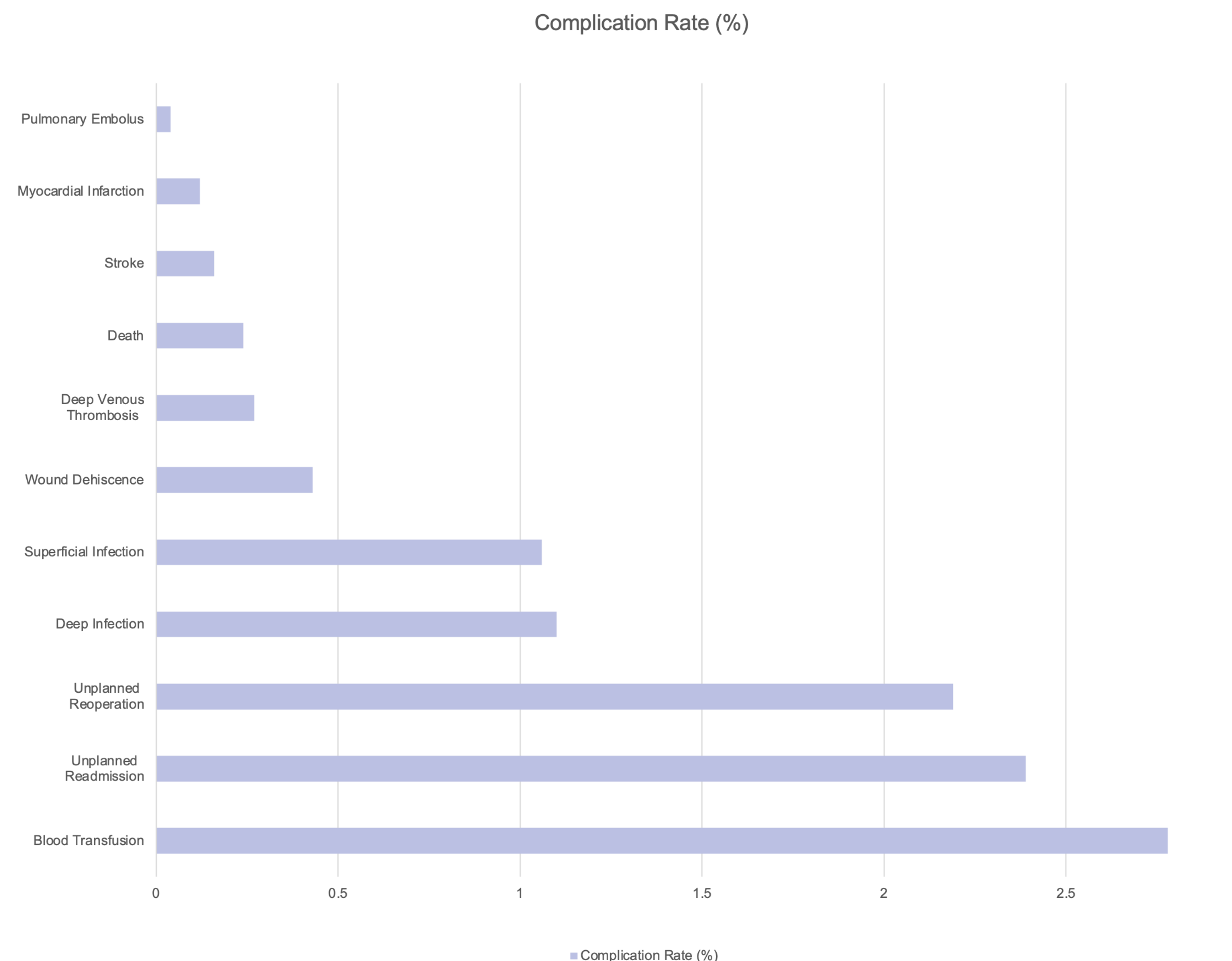


Table 1. 30-day postoperative complication rates following surgical treatment of benign bone tumors

DISCUSSION

Consolidated reporting of complication rates for orthopaedic excision of benign bone tumors is lacking in the literature. This observational, retrospective database review aimed to quantify those complication rates utilizing the ACS NSQIP database. Table 1 demonstrates an overall low complication rate in the early postop period for commonly measured outcomes. The study has limitations inherent to a retrospective database review.

CONCLUSION

An overall mean complication rate of 0.98% was discovered, with the most common being blood transfusions (2.78%), unplanned readmission (2.39%), and unplanned reoperation (2.19%). Further study by specific diagnosis will be conducted to further elucidate these complications and allow for improved informed consent for these common procedures.

Disclosures

The authors have no actual or potential conflict of interest in relation to this research.

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