

Learning Objectives

To analyze rates of unplanned readmissions, pre-operative risk factors for unplanned readmissions and post-operative survival among patients with spinal metastasis.

Introduction

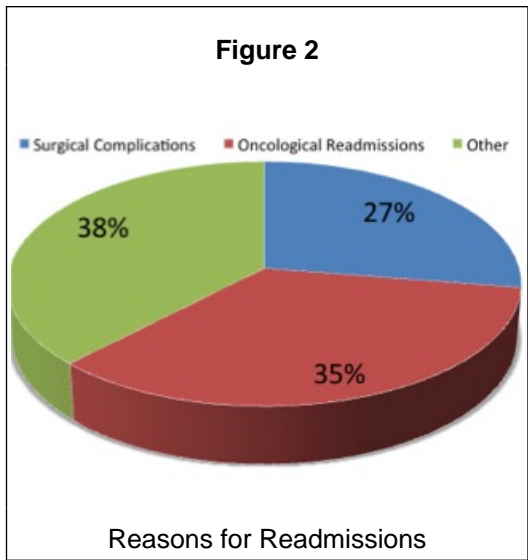
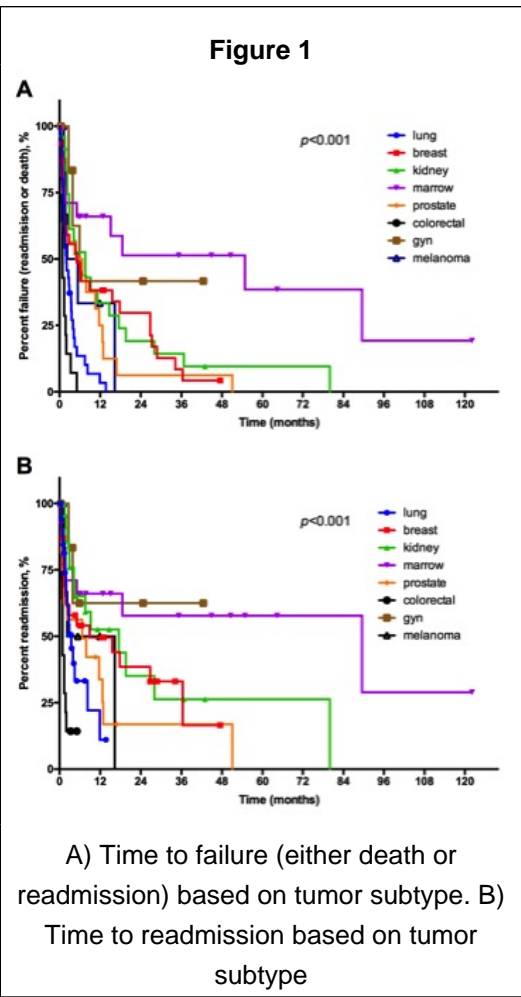
The spinal column is the most common site of bony metastasis from various primary tumors. Surgical management of spinal metastasis is complex and can be associated with significant post-operative morbidity. Analyzing readmission rates may serve as a proxy for post-operative morbidity and functional decline, allowing patients and physicians to make informed decisions about treatment in the setting of metastatic spine disease.

Methods

A retrospective analysis of patients with metastatic spine disease, surgically treated at a tertiary care center was performed. Patients with primary lung, breast, kidney, bone marrow (multiple myeloma/plasmacytoma), prostate, gynecological (uterus or cervix), and melanoma were included in this study. The primary and secondary outcome variables were unplanned readmissions and overall survival, respectively.

Results

159 patients were ultimately identified for analysis. Lung, breast and kidney represented the most common primary cancer sites, accounting for 22%, 19.5% and 16.4%, respectively, of patients. 56.6% of patients had at least one readmission, with a 30-day readmission rate of 13.8% and 1-year readmission rate of 47.2%. 26.7% of readmissions were for surgical complications, 33.7% for oncological disease progression, and 36.7% for other medical reasons, unrelated to the patients’ cancer. Patients with colorectal cancer returned to the hospital within a shorter time period and had the highest number of readmissions. Interestingly, patients with melanoma had more readmissions over the course of their limited post-operative survival. The overall mortality was 59.1%, with a median survival of 15.1 months for all patients. Log rank tests demonstrated that male gender, number of comorbidities, baseline modified Rankin score and length of stay were not associated with increased risk of readmissions.



Conclusions

Unplanned readmissions provide an important window into understanding post-operative morbidity among patients with metastatic disease of the spine. This study offers an important starting point for understanding the nuances of patients’ post-operative outcomes based on the primary tumor site.

References

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