

Introduction

Targeted therapies have improved overall survival in multiple cancer types. Hence associated long term complications must be considered with current treatment paradigms. The objective of this study is to evaluate outcomes of long-term cancer survivors surgically treated for symptomatic spinal metastases.

Methods

Retrospective chart review of patients who were surgically treated at a tertiary cancer center from January 2010 to December 2015 and survived at least 24 months after treatment. Patients without clinical or radiological follow-up of at least 24 months were excluded. Collected data included patient demographics, tumor histology, type and extent of spinal intervention, radiation data including treatment dose and field, long term sequelae including local tumor control, re-irradiation, re-operation or post-operative kyphoplasty at previously treated level.

Results

Seventy-three patients were included in the final analysis, of which 36 were males and 37 females with a mean age of 60.9. The most common histologies were renal cell (19.1%), breast (17.8%), multiple myeloma (16.4%), thyroid (12.3%) and non-small cell lung carcinoma (8.2%). Open surgery was performed in 56 patients (76.7%) and minimal access surgery (MAS) in 17 (23.2%). Post-operative radiation was delivered in 43 (58.9%) cases while 21(28.7%) received pre-operative radiation and were subsequently operated for tumor progression or spinal instability and 9 (12.3%) patients did not receive adjuvant radiation. Stereotactic body radiation therapy (SBRT) was used in 42 (65%) radiation treatments. Mean clinical and radiographic follow-up were 3.7 years at long- term follow-up 80% of patients had a Karnofsky performance status (KPS) of 80 or higher (i.e functionally independent). Re -operations were performed in 16 patients (22%) including 8 for hardware revision, 4 tumor progressions, 3 wound complications and 1 post-operative blood clot. Post operatively, kyphoplasty for progressive fractures at the treated level was performed in 3 cases (4%). Re-irradiation was performed in 13 cases (17.8%) with a median time to re-irradiation of 1.8 years.

Learning Objectives

to evaluate outcomes of long-term cancer survivors surgically treated for symptomatic spinal metastases.

Conclusions

Durable tumor control can be achieved in long term cancer survivors surgically treated for symptomatic spinal metastases with a limited complication profile. Long-term sequelae include local tumor recurrence/progression, marginal radiation failures, early or late hardware failures and progressive spinal instability or deformity.

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