

The Short-Term Effect of Surgery on Health Related Quality of Life and Functional Outcome in Patients with Metastatic Epidural Spinal Cord Compression (MESCC): Results of the Ongoing AOSpine North America Prospective Multicenter Study

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Background

Traditionally, the standard treatment approach in MESCC has been radiation therapy and corticosteroids.

Over the past decade, patients have been increasingly treated with surgery, primarily in cases when there is spinal instability, progressive neurological dysfunction or a failure of radiotherapy.

An RCT (Patchell et al., Lancet; 2005) has suggested a survival benefit and improved neurological outcomes for patients with metastatic epidural spinal cord compression (MESCC) treated with de novo decompressive/reconstructive surgery.

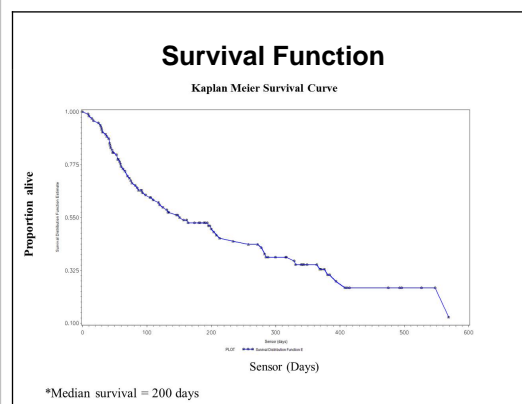
The aim of this study is to evaluate the impact of surgery on improving quality of life outcomes in the setting of MESCC.

Methods

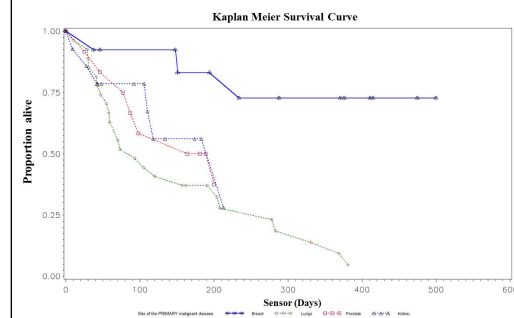
107 surgical patients were enrolled in a prospective multi-center study. Neurological, function, pain, utility and quality of life outcomes were assessed using VAS pain assessments, ASIA scale, Oswestry Disability Index (ODI), SF-36v2, and EuroQol-5D (EQ-5D) at 6 weeks, 2, 3, 6, 9 and 12 months.

Results

Demographics		Surgery (N = 107)
Age		57.5±10.2
Gender – Male		52.1%
Race	White	75.3%
	Black/African American	17.8%
	Asian	6.9%
Smoker		38.4%



Survival by Type of Primary Cancer



Neurological Outcomes Among 3-month Survivors

Variable	Baseline	3 months	P value
Able to walk at least 4 steps	71.11 %	97.78 %	0.0013
Controls bladder	82.22 %	95.56 %	0.0339
Controls bowels	86.67 %	95.56 %	0.1573

Outcomes among 3-month Survivors (N=73)

Variable	Baseline	3 months	P value
ODI	56.0±23.1	36.5±20.7	0.0001
EQ5D	0.45±0.29	0.69±0.20	0.0001
Brief Pain Index	6.9±2.3	4.7±2.3	0.0017
SF36v2 - PCS	36.1±8.9	37.3±8.7	0.4929
SF36v2 - MCS	42.8±8.7	45.1±8.8	0.2403

Outcomes in Subsample of Survivors at 3-months SF36v2 Dimension Scores

Variable	Baseline	3 months	P value
Physical Functioning	32.5±15.0	32.9±11.5	0.7695
Role Limitation - Physical	33.3±11.2	31.2±11.5	0.3901
Bodily Pain	30.1±8.2	40.3±10.8	0.0001
General Health	46.4±10.1	41.6±11.6	0.0165
Emotional Well-Being	44.6±10.4	50.3±9.4	0.0175
Role Limitation - Emotional	41.0±15.7	41.0±16.0	0.9999
Social Functioning	32.7±13.6	36.7±12.7	0.1104
Energy/Fatigue	45.2±11.3	45.9±10.4	0.9276

Conclusions

Surgically treated patients with MESCC are a diverse group of patients with different prognoses.

The surviving patients experience clinically relevant symptoms improvement and gains in function and utility.

2 out of 3 patients with MESCC survive > 3 months and about half survive > 6 months

- In these patients, surgery and XRT is associated with reduced pain, improved function (ODI) and gains in health utility (EQ5D)

1/3 of patients survive < 90 days

- Is surgery "worth it" in these patients?

Identifying the key predictors of survival > 6 months is important to improve treatment protocols in patients with MESCC

Acknowledgements

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