Malignant Spinal Cord Compression in Metastatic Prostate Cancer Patients: real world data from a single cancer centre

Nikolaos Tsoukalas[1], Christos Nikolaou[1], Ioannis Binas[1], Alexandra Dudek[1], Athanasios Pouptsis[1], Deborah Enting[1], Simon Chowdhury[1], Sarah Rudman[1]

[1]Guy's and St Thomas' NHS Foundation Trust, Cancer Centre, London, UK

Introduction

Malignant spinal cord compression (mSCC) in prostate cancer patients is a significant problem. Clinically evident mSCC develops in approximately 10%.

Objectives

To evaluate the incidence of mSCC in prostate cancer patients deemed to be at high risk due to metastatic bone disease.

Methods

We have retrospectively reviewed all prostate cancer patients seen during a period of 6 months and have assessed the extent of bone disease based on EOD scoring system, presence of neurological symptoms and MRI spine scans. Statistical analysis used SPSS software.

Results

In total 375 prostate cancer patients were reviewed, with 59 found to be at high risk of mSCC based on the EOD scoring system (EOD ≥ 2). In particular, 54 patients with EOD=2, 3 with EOD=3 and 2 with EOD=4. 24 out of 59 (40,68%) had neurological symptoms such as weakness, numbness, sensory changes or back pain. Overall, 37 out of 59 (62,71%) underwent an MRI spine scan which was positive in 6 cases (10,17%) and with impending mSCC in 6 (10,17%). MRI scan was positive in 4 patients with EOD=2 (3 with neurological symptoms) and in 2 with EOD=3 (without symptoms). Moreover, in cases of impending mSCC 5 patients had EOD=2 (3 with neurological symptoms) and 1 had EOD=4 and neurological symptoms. Interestingly, MRI scan was negative in 17 (28,81%) patients with neurological symptoms and EOD=2.

Table: Bone Scan Extent of Disease Score

EOD score	Bone scan findings
0	Normal or abnormal from benign causes
1	Fewer than six bone metastases
2	Six to 20 bone metastases
3	More than 20 bone metastases but not a "superscan"
4	A "superscan" or its equivalent more than 75% of the ribs, vertebrae, and pelvic bones involved by metastatic tumor

EOD: extent of disease (Soloway et al., 1988)

Conclusions

mSCC is associated with significant morbidity and early detection is desirable. MRI spine scans in patients with high EOD may identify clinically important impending cord compression which should be proactively treated.

Acknowledgments

We would like to acknowledge the Hellenic Society of Medical Oncology (HeSMO) for support.