Metastatic Spinal Cord Compression: A Retrospective Audit of Current Practice on Oncology and Haematology Wards at GSTT*

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Background

Metastatic spinal cord compression (MSCC) is an oncological emergency that requires efficient and effective diagnosis, treatment and rehabilitation (NICE 2008).

MSCC quality standards for adults highlight **key needs for**:

- Early detection through appropriate assessment by; MSCC coordinator, spinal surgeon, clinical oncologist, and imaging within 24 hours
- Treatment (dexamethasone, radiotherapy or surgery) commencement within 24 hours of confirmed diagnosis
- Timely rehabilitation and discharge planning with patient and family input

Aim

To determine whether the local multidisciplinary team (MDT) management of inpatients admitted with MSCC meets national and local guidelines.

Methods

Participants: New admissions with suspected MSCC admitted to Guys hospital within the year commencing April 2017.

Design: 12 month retrospective case note audit was conducted using an audit tool developed by an expert panel of physiotherapists and Doctors reflecting the NICE and local standards for patients with a suspected and/or confirmed MSCC.

Data Collection: 80 cases were audited representing diverse diagnoses (*Fig 1)*.

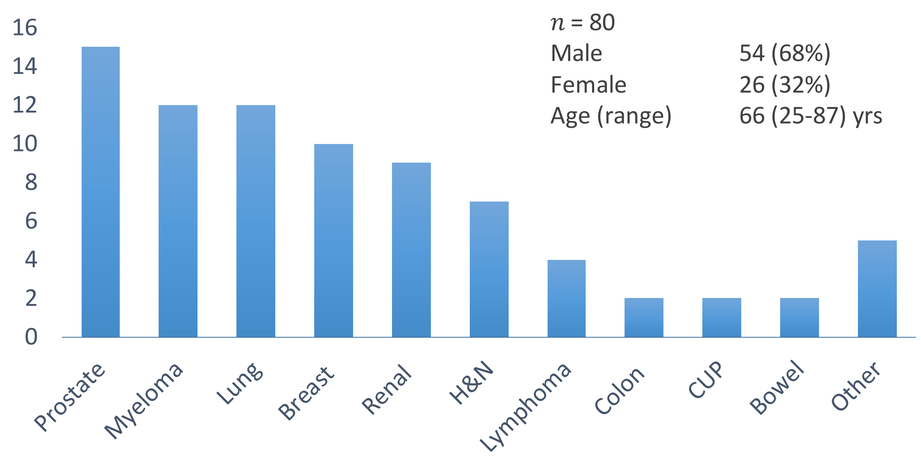


Figure 1: No of cases per tumour site

Key standards were divided into three categories; actions without delay (*Table 1* below), actions within 24-hours (*Table 2*), and additional MDT & therapy actions (*Table 3*). Expected compliance was 100% for all standards. In addition, physiotherapy rehabilitation activity was captured to describe the dose of therapy delivered and the functional outcome.

Results

A total of 64 (80%) cases were identified with MSCC (40 (50%) confirmed & 24 (30%) impending); 16 (20%) were identified with suspected MSCC.

Immediate intervention compliance across cases was at least 60% (Table 1).

Table 1: Standards documented - without delay

Standard	Compliance
Dexamethasone	88%
VTE	95%
Pain assessment	73%
Bladder & Bowel assessment	83%
Neurological assessment	70%
Documented bed rest	60%

Diagnostic imaging and medical treatment was commenced within 24-hours in 70% (max 9days) and 47% of cases (max 12days) respectively. Spinal stability was documented in 73% of cases (*Table 2*).

Table 2: Standards documented - within 24-hours

Standard	Compliance (%)
MRI or alternative imaging	70% (0-9 days)
Treatment commenced within 24hours of MRI	47% (0-12 days)
Seen by SPR or consultant within 24 hours	86%
Spinal stability	73%
Patient information about MSCC issued	2%

ASIA completion rates were 34% of cases on admission and 3% on discharge; physiotherapy timely referral and assessment rates were near 100%

In cases confirmed with/impending MSCC (n=64); 60(94%) were referred to physiotherapy within 24 hours of diagnosis (max 17 days), 61 (98%) had commenced rehab within 24-hours of referral (max 2 days) (*Table 3*).

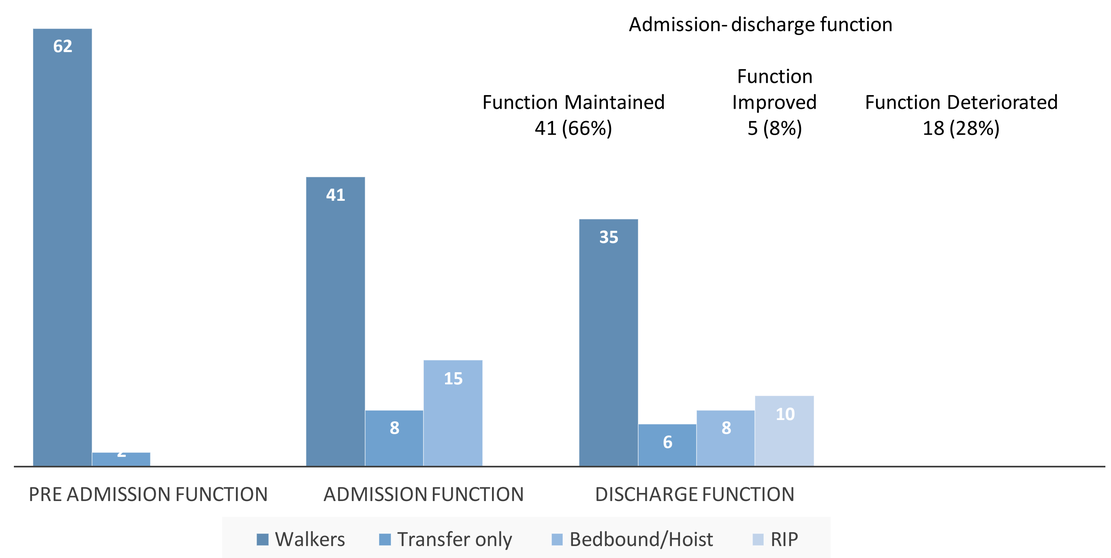
Table 3: Standards - Additional MDT and Therapy

Standard	Compliance (%)	Range
ASIA on admission	34%	/
ASIA on discharge	3%	/
Physiotherapy Referred within 24-hours	94%	0–17 Days
Assessed by Physiotherapy (of those referred) within 24 hours	100%	/
Physiotherapy rehab commenced within 24 hours of referral	98%	0-2 Days

Per case, the mean (SD) total rehabilitation dose was 17.2 (25)hrs with a mean active dose per session of 49.9 (20) mins.

Pre-admission 62 (97%) of cases were classified as walkers and 2 (3%) transfers only. Following admission with MSCC, 41 (66%) individuals maintained their level of function, 5 (8%) improved and 18 (28%) deteriorated when compared to discharge *(Fig 2).*

Figure 2: Functional Outcomes (n=64)



Conclusions

While local compliance with national and local standards in referral time to physiotherapy rehabilitation and physiotherapy response to commence rehabilitation, our audit revealed the need for improvement in the performance and/or record keeping for key diagnostic, assessment and management standards for those diagnosed or suspected with MSCC. Thus, the need for a more streamlined local pathway is evident.

Implications

- The development of a MSCC care bundle to improve timeliness of standards and to ensure quality care for patients with suspected and or confirmed MSCC is met
- Annual Audit to monitor MSCC standards
- Our findings provide some early guidance on the functional outcomes, complexity and physiotherapy resource required to manage the acute needs of those with confirmed or impending MSCC

References:

1. NICE 2008 Metastatic spinal cord compression in adults: risk assessment, diagnosis and management
2. Nice 2014 quality standard Metastatic spinal cord compression in adults
3. Pease N.J et al (2004) Developments and audit of a care pathway of patients with suspected malignant spinal cord compression. *Physiotherapy* Vol 90 (27-34)