

MALIGNANT SPINAL CORD COMPRESSION QUALITY OF LIFE ISSUES: A SYSTEMATIC REVIEW

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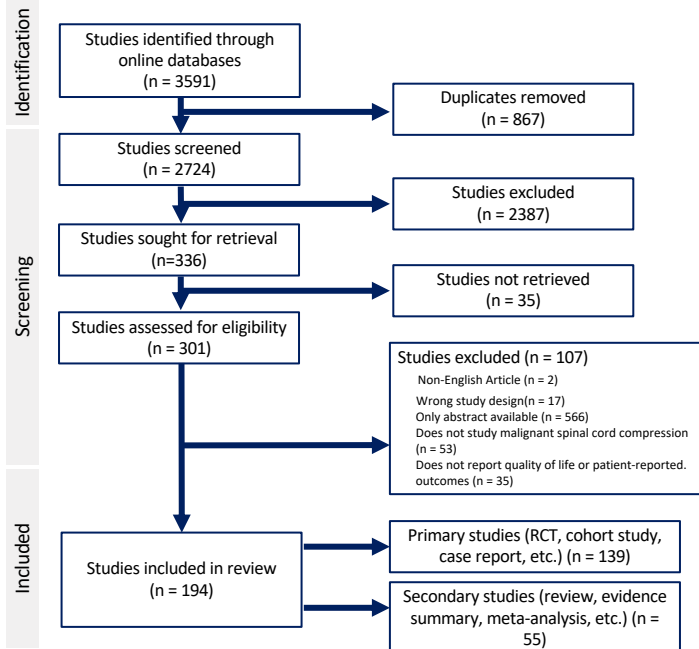
BACKGROUND AND PURPOSE

- Malignant spinal cord compression (MSCC) is an oncological emergency that can result in severe impact on patients' quality of life (QoL)
 - Existing QoL assessment tools commonly used in the literature may not capture all QoL issues experienced by patients with MSCC
- Aim:** to identify underreported QoL issues for patients with MSCC and compile a comprehensive list of QoL issues relevant to MSCC and its interventions

METHODS

- Systematic literature review between 1946 and February 2023 in:
 - OVID MEDLINE
 - Embase
 - Cochrane Central Register of Controlled Trials databases
- Studies were included if they did both of the following:
 - discussed patients with MSCC by primary tumor or secondary vertebral metastases
 - reported original data on QoL issues or toxicities in patients

Figure 1: Literature Search using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Guidelines



RESULTS

- Generalized pain was almost ubiquitous among MSCC patients
- Issues with motor function and ambulation were highly reported
- Most prominent psychosocial issues were anxiety, depression, emotional distress, and concerns about dependence on others
- QoL issues caused by radiotherapy included dysphagia, diarrhea, fatigue, and nausea/vomiting
- QoL issues caused by corticosteroid treatment included difficulty sleeping, blurry vision, weight gain, and mood disturbance
- The most common QoL tools identified were the EORTC QLQ-C30, EORTC QLQ-BM22, Brief Pain Inventory, and Spine Oncology Study Group-Outcomes Questionnaire.
 - Studies often combined multiple tools to assess different QoL domains, making cross-study comparisons difficult

Table 1. Patient-Reported Quality of Life Tools Identified

Number of papers	Quality of Life Tool
16+	Pain Visual Analog Scale
11-15	EuroQoL-5 Dimensions
6-10	36-Item Short Form Health Survey Brief Pain Inventory European Organization for Research and Treatment of Cancer QLQ-Core 30 Numeric Rating Scale Pain Score Spine Oncology Study Group Outcomes Oswestry Low Back Disability
1-5	Barthel Daily Living Index Beck Depression Inventory Core Outcome Measured Index Edmonton Symptom Assessment System Questionnaire European Organization for Research and Treatment of Cancer Bone Metastasis BM-22 European Organization for Research and Treatment of Cancer QLQ-Core 15 Palliative Functional Assessment of Cancer Therapy Hamilton Depression Rating Scale Hospital Anxiety and Depression Scale MD Anderson Symptom Inventory (Spine Tumor) McGill Pain Questionnaire Roland-Morris Back Pain Score Satisfaction with Life Scale Schedule for the Evaluation of Individual Quality of Life Study specific structured interviews

Table 2. MSCC-Related Quality of Life Issues

Number of papers	Physical	Functional	Psychosocial
51+	General pain Back pain (local/mechanical)	Non-ambulatory	None
41-50	None	Bladder incontinence	None
31-40	Radicular pain Sensory deficits (ex. anesthesia, hyperesthesia, loss of position sense etc.)	Weakness of lower extremities (paresis) Paraplegia Motor deficits Reduced mobility (i.e. requires aid to ambulate) Bowel incontinence	None
21-30	None	None	None
11-20	None	General weakness Unable to perform daily tasks Unable to perform self-care	None
1-10	Hip pain Leg pain Neck pain Neck stiffness Buttocks pain Inguinal pain Pain in recumbency Hyperalgesia Dysesthesia General numbness Numbness of lower extremities Numbness of upper extremities Paresthesia Disturbed sleep/fatigue Weight loss/gain* Blurred vision* Dizziness* Dry mouth* Headaches* Loss of appetite* Nausea/vomiting* Nocturia* Shortness of breath* Difficulty remembering* Difficulty concentrating* Difficulty communicating* Dysphagia/painful swallowing* Mouth pain*	Weakness of upper extremities Tetraplegia Gait ataxia Spasticity Post void residual urine sensation Sexual dysfunction Constipation Required institutional care Tremors*	Anxiety Cancer social stigma Disability social stigma Concern about loss of independence Concerns about getting home Fear of death (worry about prognosis) Depression Worry about being a burden Embarrassment Emotional distress Frustration at receiving a late diagnosis Lack of community support Lack of knowledge about MSCC Decreased self-esteem Impact on relations with others Sadness Stress about complications Worry about uncertainty of future Concern about burden on loved ones Delirium*

*treatment-related

DISCUSSION AND CONCLUSIONS

- This systematic review compiled a comprehensive list of QoL issues for patients with MSCC, as well as the QoL tools used to assess it in the literature
- Future research should look toward the development of an MSCC-specific QoL tool that can capture the unique challenges faced by patients with MSCC, and simplify measurement for future QoL research in this area