Relieving Low Back Pain And Improving Mobility For An Adult Patient with Progressive Multifocal Leukoencephalopathy: A Case Report

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Background and Purpose:
- Progressive Multifocal Leukoencephalopathy (PML) is a progressive demyelinating disease caused by the John Cunningham Virus (JCV)¹
- There is no FDA approved JCV-specific treatment²
- Only one other case report found regarding PT interventions
- Purpose: This case report examines interventions administered to address low back pain (LBP) and functional mobility deficits

Case Description:
- 51-year-old male
- Referral for: Low back pain (7/10), Poor functional mobility and R hemiparesis in a patient with PML
- PMH: PML, HIV+
- Clinical Presentation: Decreased bilateral hip and knee range of motion (ROM), expressive aphasia, impaired executive functioning, decreased balance, ataxic gait, R LE spasticity
- PT diagnosis: R hemiparesis and LBP

Interventions:
- Orthopedic manual therapy to address limitations in ROM and relieve discomfort
  - Interventions included: joint mobilization, passive ROM and proprioceptive neuromuscular facilitation stretching
  - Therapeutic exercise, Neuromuscular Re-education addressing ROM limitations, strength deficits and impaired functional mobility

Outcomes and Goals:
- Improved low back pain per visual analog scale to 0/10 resting and 0/10 with activity
- Increased LE ROM to WNL
- Improved subjective outcome measure score
- Sustained functional mobility from evaluation
- Pt met all short-term goals (6wks)
- Patient requested discharge for treatment of low back pain and re-evaluation for UE radioulopathy
- Long term goals were not met due to patient’s self discharge

Outcomes and Goals:

- Initial Evaluation
- Discharge

Tests & Measures

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<thead>
<tr>
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<th>Initial Evaluation</th>
<th>Discharge</th>
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<tbody>
<tr>
<td>Timed Up and Go</td>
<td>35s – Increased Fall Risk¹</td>
<td>35s – Increased Fall Risk²</td>
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<tr>
<td>Focus on Therapeutic Outcomes (FOTO)</td>
<td>30/100 – G-code modifier CL = 70% impairment</td>
<td>40/100 – G-code modifier CL = 60% impairment</td>
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Discussion:
- The physical therapy management was successful for relieving low back pain
- The patient did not demonstrate significant improvement in functional mobility
- Cognition declined and negatively impacted therapy
- Future research: establish guidelines for goal setting for patients with progressive neurological conditions

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Figure 1 Key:
- Ext = Extension
- ER = External Rotation
- IR = Internal Rotation
- Flx = Flexion
- DF = Dorsiflexion

Range of Motion Values

Core Principles of Palliative Care²

Optimize Remaining Function

Relieving Discomfort

Realistic Short-Term Goals

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