Pilates as a primary treatment modality in a patient with a Glioma: A Case Study

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RESEARCH QUESTION: What are the effects of using Classical Pilates as a treatment modality in improving balance, function and quality of life, for a patient with a Glioma?

METHODS

PATIENT/ SUBJECTIVE HISTORY
- 43yo male
- Social: wife + 4 daughters
- Engineer, stopped working in August 2016
- Initial Physio Ax- March 20, 2017 – for ++ Tsp Pain
- Mobility Status- 4pnt cane, discussed walker.
- PMHx:
  - Dx Glioma Dec 2009 (Left frontal, spread into Left temporal). Brain Injury Clinic for PT 2013
  - Severe Concussion Oct 2012
  - Herniated T4/5, T5/6 discs
  - Weight loss (Aug 2015- 280lbs, Mar 2017- 150lbs)
  - Gall Bladder Surgery Jan 2017
  - Other: ++ stomach pain (? Referral from Tsp), HA’s

CHIEF COMPLAINTS ON AX (March 2017)
- ++ pain in Tsp
- AGG: Prolonged standing and sitting, worse in PM, referred rib pain
- EASE: movement, change of position, laying supine
- PAIN: 5/10 pain- 10/10 pain, constant HA pain
- Sleeping: 4-5hrs/night

PATIENT GOALS:
- ↑ overall strength to improve quality of life
- Wants to keep up with daughters/ ↓ fall risk
METHODS

BASELINE TESTING:

- BERG BALANCE SCALE: 26/56
- FACT-G SCORE: 39
- Long Sit (*photo)
- Baseline Videos of Pilates Repertoire

PROGRAM

- 3mo Program (June 12, 2017- Aug 31, 2017) using Classical Pilates as the primary treatment modality
- (20) x1hr Pilates sessions
- Sessions 2x/ week for 3mo
- Pilates equipment utilized:
  - Reformer, Cadillac, Wunda Chair, Spine Corrector, Foot Corrector, Ped-O-Pull (some matwork)
- Outcome Measures Selected:
  - Berg Balance Scale (BBS)
  - FACT G (Version 4)
  - Video/ Photography
RESULTS

OBSERVATIONS

BASELINE TESTING:

• Unable to touch toes, ↓ Lsp Flexion
• ↓ coordination with Right leg circles
• ↓ Right Scapular Control
• ↓ ROM R. Tsp, splay in Tsp with movement
• Kyphotic Tsp in seated
• ↓ Symmetry of feet in Footwork (*photo)
• Overall: ↓ coordination, balance and ROM on the Right side (upper and lower extremity)
• GOALS: ↑ Tsp extension, ↑ post chain, ↑ control in adductors

POST TESTING:

• Able to touch toes, ↑ Lsp flexion
• ↑ Coordination Right U/E & L/E
• ↑ Scapular control
• ++ Improved Tsp extension range, ↓ Tsp splaying
• Independent with Stand to floor test (no hands)
• ↑ stability on the Right leg in standing
• Improved Symmetry in feet with footwork (*photo)

OVERALL: ↑ coordination, balance and ROM on the Right side (upper & Lower extremity), Improved overall strength demonstrated in Pilates exercises (*see video)
RESULTS

OUTCOME MEASURES:

- BERG BALANCE SCALE: 26/56 → 43/56
- FACT-G SCORE: 39 → 51
- Long Sit (*photo)
- Post Testing Videos of Pilates Repertoire
- *SEE PRE & POST TESTING VIDEO: https://youtu.be/7I5TX5PputA

SUBJECTIVE RE-ASSESSMENT

- Tsp Pain/ Rib Pain: typically 2-3/10 (10/10 previously)
- Treadmill Training: 45', 5 days/week (previous: 0)
- Diet: remains to be poor
- Abdomen Pain: intermittent
- H/A - worsening - recent Botox injection for same
- Gait - clears feet in swing phase, uses Quad cane.
- Sleep/ night: 5hrs
Pilates as a primary treatment modality resulted in improvements in balance, coordination, core strength & quality of life. Further investigation on its use with neurological patients & utilization in a clinical setting should be further explored.