

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

DANI WEST, PT

Dani West, PT

Indepth Physiotherapy

Pilates Instructor at Embody Pilates

e. indepth.physio@gmail.com

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

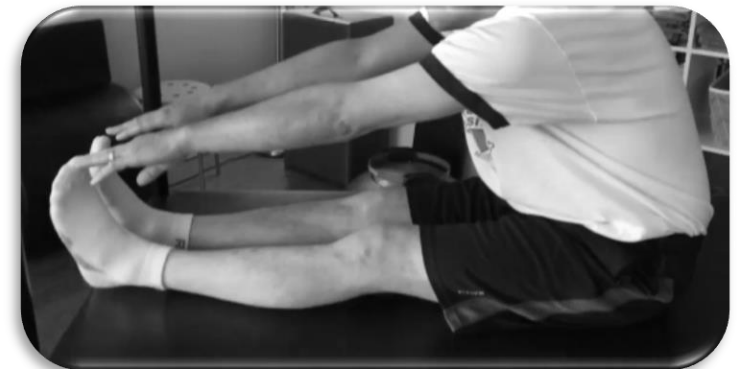
METHODS

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) x1 hr 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, splays 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/7l5TX5PputA>

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





CONCLUSION

*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.*