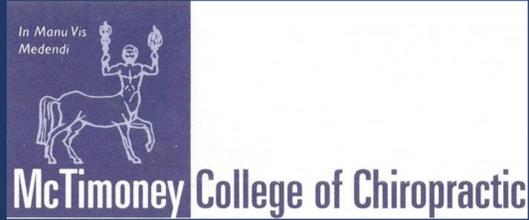


An investigation into the relationship between rider pelvic asymmetry and equine pelvic asymmetry in relation to the use of physical therapy



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BACKGROUND: There is increasing use of physical therapies for both horse and rider. Consideration of the horse and rider as a partnership and how they can affect each other is important. Physical therapy may have an impact on pelvic asymmetry of both horse and rider independently. Pelvic asymmetry can indicate musculoskeletal imbalance and affect performance. Scientific research linking their asymmetries and correction is lacking. Previous research identified a positive relationship between the direction and degree of horse pelvic rotation and rider pelvic tilt[1].

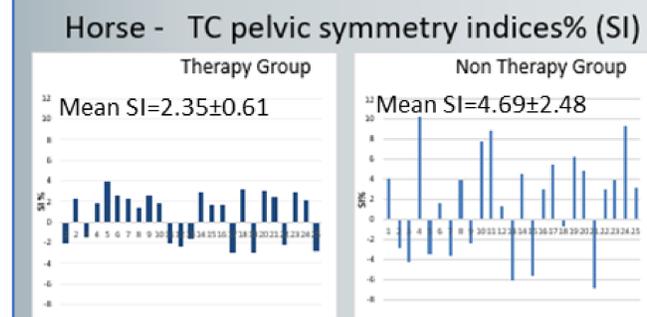
AIM: To investigate if single horse/rider combinations who have regular (4 or more times per year) physical therapy will have improved pelvic symmetry compared to horse/rider combinations that have no physical therapy.

METHODOLOGY

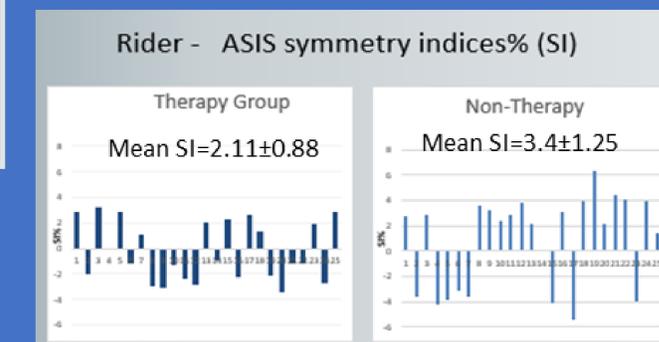
- Fifty single horse (age, 6-14yrs) and rider (age, 18-45yrs) combinations (minimum 6-month partners) were selected with inclusion/exclusion criteria.
- Treatment group(n=25) horse and rider pairs had both received regular physical therapy (chiropractic, osteopathy, physiotherapy or sports massage therapy).
- Control group(n=25) pairs had received no physical therapy treatment for a minimum of 1 year prior to the study.
- On level ground, triplicate measurements of horse tuber coxae (TC) heights (stood square) and rider anterior superior iliac spine (ASIS) (feet@30cm) to floor were taken using a plumb line.

RESULTS

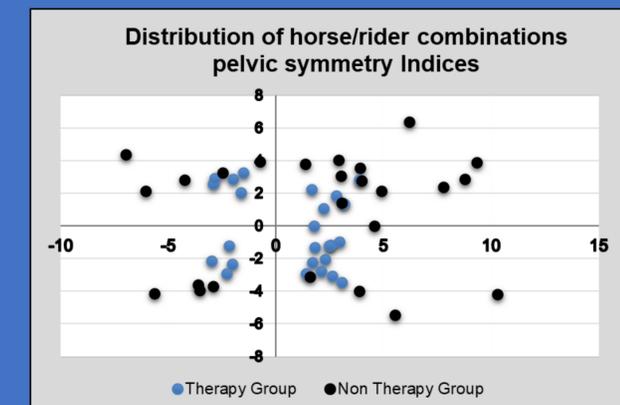
- HORSES: There was a significant difference between treatment and control groups pelvic Symmetry Indices (SI) $p < 0.0001$



- RIDERS: There was a significant difference between treatment and control groups pelvic Symmetry Indices (SI) $p < 0.0001$



- There was no significant correlation between horse TC and rider ASIS asymmetry means for treatment group ($r^2=0.04$, $F=0.95$, $p=0.34$) or control group ($r^2=0.01$, $F=0.29$, $p=0.6$)



REFERENCES

[1] Browne L., Hedderly S., Charlton S., Cunliffe C. (2014) 'An investigation into relationships of horse and rider pelvic asymmetry' Advances in Animal Biosciences Vol 5 (1) p55.

LIMITATIONS

- Measurement of pelvic symmetry made on a single day,
- Effects over time of interest and in relation to therapy type and number of sessions

CONCLUSIONS

- Positive evidence that regular use of physical therapy for both horses and riders may improve pelvic symmetry measures of the horse and rider individually.
- There was no relationship between the amount of pelvic rotation symmetry of the horse and the rider ASIS pelvic symmetry.
- Further research of the effects of individual physical therapies on pelvic symmetry measures for both horse and rider individually and as a pair is recommended and in relation to performance parameters .