RESULTS

- Table 1 presents a standard deviations for players who did not complete the 3-week training program
- Tests 2 & 3 present pre- and post-training performance means for players who completed VMRT training
  - Proactive mode VMRT improved 67 ms (Table 4) and 7 additional hits (Table 5) from pre- to post-training
  - Reactive mode VMRT improved 21 ms (Tables 2 & 3) and 13 additional hits (Table 6) from pre- to post-training
  - Reactive - B mode VMRT improved 25 ms (Tables 2 & 3) and 13 additional hits (Table 7) from pre- to post-training

- Ring 4 performance demonstrated greatest improvements:
  - Average VMRT improved by 145 ms in the Proactive mode (p < .001; ES = 1.28; 17% faster)
  - Average hits for ring 4 increased by 5 in the Reactive mode (p < .001; ES = 1.19; 56% more)

- Reactive mode outer ring (d = 5) to inner ring (d = 2) VMRT ratio (D3) demonstrated significant improvement:
  - Pre-training O/I = 1.63 ± 0.17; Post-training O/I = 1.44 ± 0.13 (p < .002; ES = 1.08; n = 0.57)

CLINICAL RELEVANCE

- The 3-week training program produced substantial improvements in VMRT performance in all 3 testing modes
  - Improvement magnitude greater for outer rings, suggesting a positive peripheral detection adaptation
  - Faster response to external environmental stimuli may be facilitated, thereby reducing injury risk

- Lesion Ring 5 vs. 4 improvement may relate to diminished potential for training extreme limits of visual field

- Postural balance challenges during VMRT training may be beneficial for improved LE dynamic joint stability

- Substantial improvement from pre- to post-training number of hits in outer rings while balancing on BOSU device

- Emerging evidence supports a relationship between neurocognitive perception-action coupling and injury risk

- VMRT screening and training appear to offer great potential for injury risk reduction

- More research is needed to establish normative values for different populations of athletes (e.g., gender)

REFERENCES