

Research review

This instalment features three studies of devices for pelvic floor rehabilitation, a paper on hypopressive exercises and research into football as exercise for men with prostate cancer.

Te Brummelstroete *et al.* (2019) reviewed the scientific evidence for pelvic floor devices presented at conferences. They state that, in the absence of a gold standard for evaluation, marketing has become more prominent than scientific assessment. From literature searches of conference abstracts from 2016 and 2017, the authors identified 11 products, but only seven of these were covered by published research. The sample sizes used in the available literature were small, and there was a lack of convincing evidence for the efficacy of most devices.

Dmochowski *et al.* (2019) carried out a randomized controlled trial (RCT) comparing the INNOVO neuromuscular electrical stimulation (NMES) device (Atlantic Therapeutics Ltd, Cappanabornia, County Galway, Ireland) with intravaginal NMES (iTouch Sure, TensCare Ltd, Epsom, Surrey, UK) in 180 women with stress urinary incontinence (UI). The outcomes were similar in both groups, and there was a comparable rate of adverse events: intravaginal treatment was associated with more vaginal and urinary tract infections, and the INNOVO with more discomfort and/or pain related to the device. The INNOVO is significantly more expensive than the intravaginal device.

A very small group of 23 premenopausal women participated in a pilot study by Rosenblatt *et al.* (2019) that evaluated an accelerometer-based biofeedback device for pelvic floor muscle (PFM) contractions. This product (leva, Renovia Inc., Boston, MA, USA) is not currently available in the UK. It uses accelerometers to assess the precise movement of the sensors relative to each other and the earth, and users receive real-time visual feedback on a smartphone app. In contrast to other devices that measure electrical activity or pressure, the leva relies on lifting or descent of the pelvic floor. The outcomes were good, but the study had no control group.

In a prospective cohort study, Juez *et al.* (2019) demonstrated a greater improvement in

levator ani muscle thickness with hypopressive exercises compared with PFM exercises in 105 postpartum women. However, although information about UI was collected, there appeared to be no statistical difference between the groups with regard to this issue. This calls into question the significance of levator ani muscle thickness in relation to UI.

Finally, Bjerre *et al.* (2019) studied quality of life (QoL) and bone mineral density in an RCT of men with prostate cancer, including metastatic disease, who participated in community football groups. They found that men who took part in football had improved hip bone density and were admitted to hospital less frequently, and men who did so more than once a week had improved mental health. Prostate-cancer-specific QoL did not change. The authors suggest that clinicians should encourage men with prostate cancer to participate in sport to mitigate some of the effects of treatment.

Alison Clarke

Research Reviews Editor

References

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