
Pelvic Physiotherapy Distance Journal Club - July 2020
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Introduction:
• Efficacy of conservative treatments for men with urinary incontinence post-prostatectomy is largely unknown due to insufficient and low quality evidence.
• This systematic review and meta-analysis looked at 15 studies to determine if pelvic floor muscle training (PFMT) alone or in combination with biofeedback (BFB), and/or electrical stimulation (ES) is effective.
• When choosing articles, authors used the GRADE to rate quality of evidence, which was rated low, medium or high quality (p. 934).
• What the authors found is similar to what we know about urinary incontinence in women - we know PFMT is effective and useful, but we don't have clarity as to what specifically is useful and when.
• Discrepancies with definitions and use of BFB and ES in article - authors stated that BFB is used in addition to PFMT if the patient is unable to generate a urethral sphincter contraction (p. 933).
• Also stated that ES is used with UI to induce bladder or sphincter contraction (p.933).
• Inconsistent with type of prostatectomy performed and no baseline functional status known.

Purpose: To evaluate the effectiveness of PFMT works well alone, or in combination with BFB, ES or both in the management of UI in men post-prostatectomy.

Study Design: Systematic review and meta-analysis of 15 articles
Inclusion
• RCTs that compared PFMT with ES, BFB or both and no treatment, placebo or sham.
• The definition for no-treatment control was participants who received only oral or written instructions or both, and no formal PFMT by a trained therapist/nurse.
Exclusion
• Pre and post-operative PFMT were also excluded.
• No studies that combined PFMT with behavioral therapy
• No studies comparing active treatments (BFB to ES, PFMT to BFB or ES etc).

Data synthesis: Meta-analysis to compared studies of similar interventions. Post intervention data were used to determine the pooled estimate of difference between groups.

Results: 15 studies, 3503 men aged 45-90yo
PFMT vs no-treatment controls: moderate evidence to support PFMT to improve urinary continence after treatment protocol and low quality evidence shows PFMT improves continence immediately
• 5 moderate GRADE studies: significantly larger number of men who were continent in the PFMT group than no-treatment group at follow-up.
• 3, low GRADE quality studies showed significantly larger number of men in PFMT group who were continent than the no-treatment group immediately after intervention.
• 2 low GRADE quality: no statistical difference between PFMT group and no-treatment group on grams of urine lost after intervention.

PFMT plus ES vs no-treatment control and sham ES: PFMT plus ES better than no treatment or sham ES
• 2 moderate GRADE: PFMT plus ES better than no treatment
• 1 moderate GRADE: PFMT plus ES better than sham ES

PFMT plus BFB vs no-treatment control: no significant difference
• 5 low-moderate GRADE: PFMT plus BFB had more continent men, but not significant
• 2 moderate GRADE: PFMT plus BFB no difference

PFMT plus BFB and ES vs sham ES
• 1 moderate GRADE: treatment group significantly more continent

Discussion:
• PFMT alone showed improvement in continence, but we don't know what PFMT was. How were men cued, what was muscle training protocol?
• PFMT and ES also had statistically significant improvement in continence, but again we don't know protocol. What settings were used, how often etc.
• Still unclear about use of BFB. How does PFMT plus BFB differ from just PFMT?

Strengths:
• Comprehensive search from variety of sources
• Use of GRADE method to rate quality of evidence/study

Weaknesses:
• Some studies were small
• Many low GRADE quality studies
• PFMT plus BFB and ES meta-analysis only included one study
• Several of the studies did not mask the participants and/or assessors which can bias results
• Not sure what the parameters of the studies were: what was PFMT, parameters of ES and biofeedback?
• Not all studies identified what kind of surgery was performed for prostatectomy

Clinical relevance:
• Supports pelvic floor PT for this population
• It is evidence to support PFPT which is very useful if you are trying to market to MDs, nurses, etc

Discussion questions:
• How many PTs treating men post-prostatectomy use PFMT plus ES and/or BFB?
• How do you decide when to use BFB and when to use ES?
• Would you use ES in a patient who had cancer?
• How much does ES and/or BFB enhance PFMT in regards to continence outcomes?

Other References
ELECTROPHYSICAL AGENTS - Contraindications And Precautions: An Evidence-Based Approach To Clinical Decision Making In Physical Therapy -
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3031347/