

W20: ICS Institute – School of Physiotherapy: Conservative management for pelvic floor dysfunctions

Workshop Chair: Cristiane Carboni, Brazil 04 September 2019 09:00 - 10:30

Start	End	Topic	Speakers
09:00	09:05	Introduction by Cristiane Carboni and Melanie Morin	Cristiane Carboni
			Melanie Morin
09:05	09:25	Conservative management for preventing and treating urinary	Chantale Dumoulin
		incontinence and pelvic organ prolapse in women: What is the evidence?	
09:25	09:30	Questions	All
09:30	09:45	New technologies for pelvic floor muscle training : Are they	Julia Herbert
		useful and effective ?	
09:45	09:50	Questions	All
09:50	10:05	Obstetric anal sphincter injury: What can a physiotherapist do?	Paula Igualada-Martinez
10:05	10:10	Questions	All
10:10	10:20	Bioelectrical stimulation and the pelvic floor in the erectile	Cristiane Carboni
		function	
10:20	10:30	Discussion	Cristiane Carboni
			Chantale Dumoulin
			Julia Herbert
			Paula Igualada-Martinez

Aims of Workshop

There is growing evidence supporting the effectiveness of conservative management for various pelvic floor disorders. The International Consultation on Incontinence (ICI) book has been updated with new evidence for conservative management for pelvic organ prolapse, urinary and anal incontinence. Moreover, new technologies assisting pelvic floor muscle training are becoming numerous. Finally, recent studies have investigated treatment for obstetric anal sphincter injuries and erectile dysfunctions. Clinicians should be aware of these new evidences to guide the selection of optimal interventions. This workshop will provide a thorough update of the evidence and will enable clinicians to transfer this knowledge into their clinical practice.

Learning Objectives

- 1- To discuss the conservative management for urinary incontinence and pelvic organ prolapse including lifestyle interventions, pelvic floor muscle training, e-technologies and adjunct modalities;
- 2- To update clinicians on the evidence for prevention and treatment of obstetric anal sphincter injury and related pelvic floor disorders;
- 3- To discuss the role of physiotherapy for erectile dysfunction.

Learning Outcomes

This workshop will provide a thorough update of the evidence and will enable clinicians to transfer this knowledge into their clinical practice.

Target Audience

Urology, Urogynaecology, Bowel Dysfunction, Conservative Management

Advanced/Basic

Intermediate

Suggested Learning before Workshop Attendance

Dumoulin C. Adewuyi T, Booth J, Bradley K, Burgio K. Hagen S, et al. (2017) Adult Conservative Management. In Abrams PH, Cardoza L, Khoury AE and Wein A, Éds.: 6th Ed. International Consultation on Urinary Incontinence, Plymbridge United Kingdom. Volume 2, pages 1443-1628.

Dumoulin C., Alwijnse D, Bo K et al. (2015) Pelvic-Floor-Muscle Training Adherence: Tools, Measurements and Strategies—2011 ICS State-of-the-Science Seminar Research Paper II of IV. Neurourology and Urodynamics 34:615–621.

Hui A., Johnson L. (2015). iPhone apps as an adjunct to supervised pelvic floor muscle training in women: a content analysis. Journal of Pelvic, Obstetric and Gynaecological Physiotherapy. 116;38-50.

Mathé M, Valancogne G, Atallah A, Sciard C, Doret M, Gaucherand P, Beau Is E. (2016) Early pelvic oor muscle training after obstetrical anal sphincter injuries for the reduction of anal incontinence. Eur J Obstet Gynecol Reprod Biol. 2016 Apr;199:201-6.

Johannessen HH, Wibe A, Stordahl A, Sandvik L, Mørkved S. (2017) Do pelvic floor muscle exercises reduce postpartum anal incontinence? A randomised controlled trial. BJOG. Mar;124(4):686-694. doi: 10.1111/1471-0528.14145. Epub 2016 Jun 7.

Carboni C, Fornari A, Bragante KC, Averbeck MA, Vianna da Rosa P, Mea Plentz RD. (2018) An initial study on the effect of functional electrical stimulation in erectile dysfunction: a randomized controlled trial. Int J Impot Res. Jun;30(3):97-101.

Cohen D, Gonzalez J, Goldstein I. The Role of Pelvic Floor Muscles in Male Sexual Dysfunction and Pelvic Pain. Sex Med Rev. 2016 Jan;4(1):53-62.

Speaker 1 (Chantale Dumoulin)

Conservative management for preventing and treating urinary incontinence and pelvic organ prolapse in women: What is the evidence?

The objective of the 6th International Consultation on Incontinence chapter on Adult Conservative Management was to review and summarize the new evidence on conservative management of urinary incontinence and pelvic organ prolapse in order to compile a current reference source for clinicians, health researchers, and service planners. In this workshop presentation, we will review the highlights and new evidence on female and male conservative management.

In the 6th International Consultation on Incontinence chapter on Adult Conservative Management, revision and updates of the 5th International Consultation on Incontinence Report using systematic review covered years 2011-to 2015. In the workshop, each section will be presented with a brief definition and description of the intervention followed by a summary, where possible, of both the state and level of evidence for prevention and treatment, and will end with a "grade of recommendation." The presentation will conclude with areas identified as requiring further research.

For urinary incontinence, there is presently no prevention trials on lifestyle interventions. There are, however, new intervention trials of lifestyle interventions involving weight loss and fluid intake with improved levels of evidence and grade of recommendation for men.

Outside of pre- and post-natal pelvic floor muscle training trials for the prevention of female urinary incontinence, there is one new pelvic floor muscle training prevention trial for older women with urinary incontinence. Pelvic floor muscle training remains the first-line treatment for female urinary incontinence with high levels of evidence and grades of recommendation. In men with urinary incontinence, pelvic floor muscle training levels of evidence and grade of recommendation have been clarified.

Vaginal cones, bladder training and electrical stimulation levels of evidence and grades of recommendation are mostly maintained. Posterior tibial nerve stimulation for the treatment of urinary incontinence, has been added to the 6th International Consultation on Incontinence chapter on Adult Conservative Management and is linked with levels of evidence and grade of recommendation of interest for men and women.

Finally, for pelvic organ prolapse, there is one new prevention trial supporting the effectiveness of pelvic floor muscle training in reducing pelvic organ prolapse related symptoms. Pelvic floor muscle training remains a first line treatment for pelvic organ prolapse treatment.

Take home message:

Overall, there is increasing evidence to support the use of conservative management as first line treatment for urinary incontinence in men and women, and for pelvic organ prolapse.

Large, well design trials with long-term follow-up and economical analysis are needed for prevention and treatment.

Speaker 2 (Julia Herbert)

New technologies for pelvic floor muscle training: Are they useful and effective?

Over the last 5 years there has been a significant increase in the use of new technology in healthcare – in the pelvic floor arena this has been particularly in the form of smart phone apps.

This presentation will include a review of how the use of new technology can aid the rehabilitation of pelvic floor muscle dysfunction.

The scope of this presentation will include:

- Lower urinary tract dysfunction urinary incontinence / voiding difficulty / storage symptoms
- Lower Bowel dysfunction— anal incontinence / constipation / obstructed defaecation
- Pelvic organ prolapse (POP)
- Sexual dysfunction
- Pelvic Pain

A range of therapeutic scenarios will be considered including urinary incontinence, faecal incontinence, obstructed defaecation and pelvic pain.

Technologies reviewed will include:

- pelvic floor muscle exercise apps
- exercise apps that link to devices such as EMG, pressure or other technology to give feedback on performance
- exercise apps that can be monitored remotely by clinicians
- > neuromuscular electrical stimulation

Many of these devices have been developed for self-care and are sold commercially as over the counter devices. Consideration will be given to the human factors (usability) of such devices.

The clinical evidence supporting these technologies will be reviewed and implications for current clinical and future practice in this speciality will be considered.

Take home message:

In the future, clinicians working in the speciality of pelvic floor muscle rehabilitation will be faced with an ever-increasing array of technology that has been developed to assist pelvic floor muscle training. It is important that we assess the clinical evidence supporting these technologies and that we remain aware of emerging technologies that may be of benefit to our patients.

Speaker 3 (Paula Igualada-Martinez)

Obstetric anal sphincter injury: What can a physiotherapist do?

Obstetric anal sphincter injuries (OASIS) are caused by perineal trauma during vaginal delivery. More commonly referred as third- and fourth-degree perineal tears, these injuries involve the anal sphincter complex and in more severe cases, the anal mucosa. In addition to short-term perineal pain, OASIS is the number one risk factor for loss of bowel control in childbearing women. OASIS and bowel related dysfunction can also coexist with other pelvic floor disorders such as urinary incontinence.

Conservative management is often considered as the first line approach for pelvic floor dysfunction following OASIS due to its' safe, effective and non-invasive nature of the interventions. It has been recommended by the Royal College of Obstetricians and Gynaecologist (RCOG), National Institute for Clinical Excellence (NICE), the International Continence Society (ICS) and The Royal College of Surgeons (UK). Conservative management includes advice on bowel retraining and lifestyle interventions such as the recommendation of a diet that promotes an ideal stool consistency and predictable bowel emptying and techniques such as transanal irrigation to facilitate bowel evacuation.

Conservative management also includes electromyographic (EMG) biofeedback, neuromuscular electrical stimulation (NMES) and in particular, pelvic floor muscle training (PFMT). PFMT has a Level-A evidence rating and has been recommended as first line prevention and treatment of urinary incontinence (UI) in the adult female population. It is hypothesized the PFMT may also be effective in treating anal incontinence (AI) in the postpartum population and is routinely advocated as first line management of AI.

There are antenatal interventions that the physiotherapist may utilise as a preventative measure to reduce the risk of OASIS and these include perineal massage and PFMT. The physiotherapists can also manage women in the acute period by providing information on how and when to activate the pelvic floor musculature following OASIS repair, how to manage perineal pain and how to empty the bowels correctly.

This presentation will cover the most UpToDate evidence regarding the conservative management of pelvic floor related disorders following OASIS repair as well as the physiotherapist role in managing this group of women. It is also an opportunity to raise awareness of bowel dysfunction in a society that predominantly focuses on urinary incontinence following birth trauma.

Take home message:

- The physiotherapists play a pivotal role in the rehabilitation of pelvic floor dysfunction following OASIS
- Conservative management should be the first line management of OASIS related bowel, bladder and perineal dysfunction.

Speaker 4 (Cristiane Carboni)

Bioelectrical stimulation and the pelvic floor in the erectile function

Numerous therapeutic strategies exist to improve erectile function. While these therapies have proven to be safe and effective, they have their limited use prior to sexual practice and do not modify the physiological mechanism of penile erection. The number of men needing treatment for erectile dysfunction (ED) has been increasing and treatment options continue to expand, with more attractive alternatives.

To understand the possible conservative treatment for ED we will revise what is in the literature and new possibilities. In the different forms of erectile dysfunction, the main change that can occur is in the smooth muscle of the penis8, secretion site of nitric oxide (NO), which is considered the factor for the immediate relaxation of the penial vessels and the cavernous body. NO generated endothelially plays a very important role in the maintenance of erection and endothelial dysfunction may contribute to many subgroups of ED. Studies show that functional electrostimulation (FES) has an endothelial regenerative effect in an animal model with increased release of NO. This approach is beneficial in the treatment of dysfunctions of the smooth muscle and might be beneficial, also in the ED that is caused by the anomaly of the smooth muscle cavernosa.

The regeneration of smooth muscle cavernosa by FES should result in the spontaneous return of erectile capacity if there are no other factors involved in the etiology of ED. Contraction of the ischiocavernosus participates in the process of enhancing erectile rigidity by compressing the roots of the corpora cavernosa and inducing short-term suprasystolic intracavernosal pressures. Further, bulbospongiosus contraction leads to temporary engorgement of the glans penis and corpus spongiosum and results in similar short-term increases in intraspongiosal pressures showing the importance of pelvic floor muscle training in the erectile function.

Take home message:

There is increasing number of articles showing evidences of the use of conservative management in the erectile dysfunction. Large, well design trials with long-term

follow-up are needed to confirm the benefits of bioelectrical stimulation in the erectile function.