

INTERNATIONAL ORGANIZATION OF PHYSICAL THERAPISTS IN WOMEN'S HEALTH

An officially recognized subgroup of the World Confederation of Physical Therapists

PRESIDENT'S MESSAGE

By Jill Boissonnault,
United States
October 31, 2000



Happy Halloween! Tonight, in the United States (and in some other countries around the world) children dress up as witches, ghosts, princesses and goblins and go door-to-door

asking, "Trick or Treat?" They always expect treats in this day and age, and come home with a large bag full of goodies that lasts until some time in December, much to the dismay of their dentists! My children are not exception (the eldest is too cool to go out anymore, but the younger two, ages 10 and 12, are still enchanted with the idea). Right now they are upstairs going through their night's take and eating themselves sick. And, like the good mother I am, I will not interfere, but will quietly sneak a few pieces my self as the days wear on and they are less and less likely to notice missing pieces of candy. This has not much to do with IOPTWH, except that as I sit down to write to all of you again, I am reminded of the passing of time and of how, as President of this organization, I have filled it over these past months. The seasons move forward, our days are marked by holidays, such as Halloween, and changes in weather, and the work we are involved in, and the goings-on in the lives we touch. So, let me fill you in on what I have been doing as President these last six months.

IOPTWH has been approached by the Austrian Physiotherapy Association and the European Region, WCPT, to help find speakers for a conference in 2002 that will include papers and presentations about women's health, among other topics. Rebecca Stephenson, our Secretary, and Yvonne Van Leif, our Program Committee Chairperson, will work together to assist in this effort. It is very exciting to be of service in this area, and to have women's health at the center of and international PT conference put on by a group other than a women's health PT organization. We will alert members to the details of this conference on prevention in PT when the time gets closer.

WCPT is going to host a conference in 2001 on evidenced-based practice. This will be for invited participants and subgroups are being asked to participate. We will fund one of our members to attend and represent our views. Stay tuned for more information.

The Executive Committee (EC) of the IOPTWH is bound to meet or have a conference call approximately two years after the last general business meeting. Because the Organization is young and there is so much to attend to, I have asked that we meet in person in 2001. As of now, we will meet in October of 2001 in Oxford England in conjunction with the Association of Chartered Physiotherapists in Women's Health Annual Conference. The EC will meet together, attend the conference, and hold a forum at the conference for all attendees. Our hope is that EC's in the future will meet in conjunction with various countries' annual meetings, in an effort to obtain grass roots input on the objectives of our organization. The EC will ask for agenda items many months prior to that meeting, as we want to discuss what is relevant to all our members. We also hope many of you will attend the ACPWH conference. We will work on some informal gathering of any delegates in attendance.

Which brings me to congratulations: A big congratulations to Sue Jones, our Member-at-Large, who recently was married, and to Gill Brook, our Treasurer, who was recently elected Chairperson of the ACPWH! Well done, the both of you!

The WCPT has recently announced an effort to investigate its relationship with subgroups and asked me to fill out a survey on questions such as, what our subgroup should expect from WCPT and vice-versa? What the benefits of membership are for a subgroup? And whether we think subgroups should pay a subscription, as do member organizations in WCPT. I had input from the EC and sent it in. The next step is for WCPT to put together a discussion paper and to circulate it for feedback. We shall try to let each member in on this process, so look for an e-mail and attachment in the coming months asking for that input. The WCPT is looking to standardize processes with subgroups and to iterate the relationship between their organization and each subgroup. They anticipate 3 more

subgroups will apply for recognition at the next general meeting in Barcelona, 2003.

I hope this newsletter finds you all well. Thanks to all of you for keeping me informed of your activities and your

networking efforts (of which there are many!)...That is what we are all about.

Until next time,
Jill

LETTER FROM THE EDITOR



Welcome everyone to the first edition of the IOPTWH newsletter. As newsletter editor, my goal for the next four years is to communicate IOPTWH news to Women's Health (WH) members and share WH trends around the globe. I openly invite comments, suggestions and submissions to the newsletter and look forward to helping the Organization grow and move forward with its mandate.

I would like to thank and congratulate Jill Boissonnault for spearheading the IOPTWH movement. It was her hard work and the support of the American Section on Women's Health that has allowed us to be accepted by the WCPT as an official subgroup. The other executive members also deserve special recognition and thanks for accepting the challenges and responsibilities that go along with being the first committee.

It was a pleasure to meet the other delegates at the general meeting and then getting to know some of them over the week in Yokohama and found it encouraging to see everyone actively get involved as sub-committee chairpersons and volunteers. The next four years will be an exciting time and will bring many changes to everyone personally and professionally. I look forward to being a part of the change in the area of Women's Health in physical therapy, on an international level.

Happy reading,

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The International Organization of Physical Therapists in Women's Health is an officially recognized subgroup of the World Confederation of Physical Therapy.

This newsletter is published semi-annually and circulated to Women's Health physical therapists in the member countries of IOPTWH. For membership information contact Secretary, Rebecca Gourley-Stephenson.

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EFFECT OF POSTPARTUM PELVIC FLOOR MUSCLE TRAINING IN PREVENTION AND TREATMENT OF URINARY INCONTINENCE: A ONE-YEAR FOLLOW UP

Siv Morkved Research Fellow, Kari Bo Professor

Introduction

In order to restore function in the pelvic floor muscles after childbirth, women in most industrial countries have been encouraged to perform pelvic floor muscle exercises. Pregnancy and vaginal delivery have been considered main risk factors in the development of stress urinary incontinence. Wilson et al. found that urinary incontinence appeared to be a common problem three months after giving birth, affecting more than 34% of the women in a sample containing both primiparae and multiparae. Morkved and Bo reported an incontinence rate of 42% during pregnancy. Two months after delivery, the number of women with urinary incontinence (38%) was nearly the same as during pregnancy.

The theoretical basis for pelvic floor muscle exercise to treat and prevent stress urinary incontinence is based on the muscular changes that may occur after specific strength training. This change is supposed to be neural adaptation during the first six to eight weeks and muscle hypertrophy after a further period of strength training. A strong and well-functioning pelvic floor can build a structural support for the bladder and the urethra during an abrupt intra-abdominal pressure rise.

Postpartum pelvic floor muscle training has been demonstrated to be effective in prevention and treatment of stress

IOPTWH TREASURER'S REPORT FALL 2000

Since I last reported in the Spring, our member countries have continued to send in their dues for the year. To date there are still several payments outstanding, and these delegates will be receiving a reminder as I speak.

Our outgoings continue to be limited to administrative costs, and the production of this newsletter. Despite the distances involved and different currencies, there has only been one problem with a payment so far, when the US mail mislaid a banker's draft en route to our administrative assistant. Fortunately, this was quickly rectified.

On a personal note, I broke my ankle in June, and was non weight-bearing with a cast on my leg for 7 weeks. My sympathy for, and empathy with, patients has increased immensely!

This month I had the pleasure of playing host to our delegate from the Netherlands, Yvonne van Lijf, who attended the annual conference of the Association of Chartered Physiotherapists in Women's Health. Along with our friends from Slovenia - Gabrijela Gaber, Darija Scepanovic, Lidija Zgur and Renata Vavhnik – this gave the event a truly international feel. I hope that other delegates might visit in future years; I am happy to help with their arrangements. The 2001 event is in Oxford from 12th-14th October.

A summary of our transactions from 1st April – 30th September 2000 are:-

Income	£ 2139.89
Expenditure	£ 334.41
Current funds	£ <u>4130.39</u>

Gill Brook, Treasurer
October 2000

UPCOMING EVENTS

Evidence based physical therapy for the pelvic floor. Bridging science and clinical practice.

Postgraduate course at the Norwegian University of Sport and Physical Education
June 25-27th 2001.

Join colleagues from all over the world for this event run by Professor Kari Bø and her international faculty on pelvic floor and incontinence. Combine the course with touring Norway during the lightest time of the year and /or participation at the WHO sponsored 2nd Consultation on Incontinence in Paris July 1-3rd. The course combines lectures, discussion groups, practice, exercise and social events in beautiful Oslo. Use the great opportunity to build international network for future evidence based practice and further research in this important field of physical therapy.

For more information contact Henny Volla, The Norwegian University of Sport and Physical Education, PO Box 4014, Ullevål Stadion, 0806 Oslo Norway. E-mail: hennyv@nih.no, phone: + 47 23 26 20 27, fax: + 47 23 26 20 29

urinary incontinence in the immediate postpartum period. In an initial study Morkved and Bo concluded that, between the 8th and 16th week after delivery, a specially designed postpartum pelvic floor muscle training course was effective in increasing pelvic floor muscle strength and reducing urinary incontinence. In the group of women attending the eight-week pelvic floor muscle training course, 66% were cured immediately after secession of the supervised training period, compared with 33% in the control group. The results also showed that the success of postpartum pelvic floor muscle exercise depended on training frequency and intensity.

However, there is a lack of knowledge concerning the long term effect of postpartum pelvic floor muscle training. We have not found any follow up study addressing this item, neither are the optimal frequency and intensity for maintaining pelvic floor muscle strength known. The aim of the present study therefore was to evaluate the long term effect of the previously published postpartum pelvic floor muscle training course.

METHODS

All women, who had participated in a matched controlled trial, which assessed the effect of an eight-week pelvic floor muscle training program in prevention and treatment of urinary incontinence in the immediate postpartum period, were contacted by telephone one year after delivery. They were invited to participate in a follow up study, including interview

and clinical assessment of pelvic floor muscle function and strength. For practical and economical reasons, the individuals who undertook the assessments were not blinded with respect to the previous study.

In the original study a prospective comparison design, comprising 99 matched pairs of mothers, was used. The criteria for matching were age (2years), parity (1,2,3,4<deliveries) and type of delivery (e.g. normal vaginal, forceps, vacuum, elective caesarean section). All women in a particular Norwegian community, who were delivered at the local hospital during a one-year period, were assigned to the study's training group. A matched control group was comprised of women from a neighbouring, socioeconomically comparable community, who were delivered at the same hospital within the same period. The training group followed a specially designed pelvic floor muscle exercise course between 8th and 16th week after delivery, training with a physiotherapist in groups of five to ten participants for 45 minutes once a week, and daily exercises at home for a period of eight weeks. The physiotherapist encouraged the participants to perform two series of eight to twelve maximum contractions and to hold the contraction for 6-8 s. At the end of each contraction, three to four fast contractions were added. Participant motivation was strongly emphasised by the physiotherapist. In addition, they were asked to follow a home training program the first six months after delivery. Frequency of exercise was recorded in a training diary. The control group received the customary written postpartum instructions from the hospital. They were not discouraged from performing pelvic floor muscle exercise on their own.

Across the time of the study, several physical and social constraints resulted in some women being unable to continue. One year after the birth 180 of the mothers agreed to participate in the follow up test. Because the number of matched pairs attending the one-year follow up varied from the number in the original study, all longitudinal changes in pelvic floor muscle strength and continence status were conducted using a constant sample, including the 81 matched pairs that attended all tests. Hence, the study group consisted of 81 matched pairs (n=162), mean age (range) 28 years (19-40) and mean number (range) of deliveries 1.8 (1-5). Seventy-six pairs had normal vaginal deliveries and five elective caesarean sections. Before the intervention started eight weeks postpartum, there was no difference between the groups according to the number of women with stress urinary incontinence: 34 women in the training group and 36 women in the control group reported stress and urinary incontinence. Sixteen weeks postpartum the difference between the groups was statistically significant (P<0.05): 13 women in the training group and 24 women in the control group reported stress urinary incontinence. The regional medical ethics committee approved the study.

Evaluation

One year after delivery all subjects were asked about their continence status. Urinary incontinence was registered both in accordance to the International Continence Society's definition and in a more general term.

All participants performed a standardised test, designed for the initial study. After voiding, the women drank 1 L of water within 30 minutes. They wore a pre-weighed pad and jumped up and down for 30 s, jumped with legs in alternate abduction and adduction for 30 s and coughed three times. After the test the participants voided, the volume was measured, and the pad was weighed. The cut off point for a positive pad test was 2 g.

Two instruments, designed to measure how women perceive stress urinary incontinence and tested for reproducibility, were used before and after treatment. The leakage index is a five-point scale (1=never, 5=always) containing 13 types of physical exertions known to trigger urinary leakage. The social activity index contains nine social settings which women may have problems to participate. Vaginal palpation was used to assess the women's ability to perform pelvic floor muscle contraction. A vaginal balloon catheter (balloon size 6.7 x 1.7 cm), connected to a pressure transducer (Camtech Ltd, 1300 Sandvika, Norway), was used to measure vaginal pressure during pelvic floor muscle contractions.

Statistical Analysis

Except for frequencies, all results are given a mean value with 95% confidence intervals (CI). Categorical data were analysed by χ^2 (Table 1, 3, and 5). As several variables were not normally distributed, the Wilcoxon matched pairs test was used to test the differences within and between the two groups of matched pairs (Fig. 1). The Mann-Whitney two sample test was used to test the differences between independent groups of different sample sizes (Tables 2 and 4). P values < 0.05 were considered significant.

DISCUSSION

The results demonstrate that a significant reduction in prevalence of stress urinary incontinence and increase in pelvic floor muscle strength was maintained one year after delivery in a group of women following an eight-week intensive exercise course between the 8th and 16th week after giving birth, compared with a matched control group.

The initial training group had trained more frequently and more intensively than the control group. This group demonstrated significantly greater improvement in pelvic floor muscle strength both 16 weeks after delivery and when they were tested one year postpartum (Fig. 1). This indicates that strength training of the pelvic floor muscles has to be intensive to be effective, in agreement with the results of studies on genuine stress incontinent women.

The training period in the initial study was only eight weeks, and therefore neural adaptation (i.e. more effective motor units and increased frequency of excitation) probably caused the increase in pelvic floor muscle strength. Pelvic floor muscle strength training may have caused more effective action of the reminding motor units in the pelvic floor muscles, and thereby cured incontinence in 67% of the participants reporting urinary incontinence in the training group. In the 13 participants reporting persistent urinary incontinence at the test 16 weeks after delivery, a prolonged training period may have improved the results.

Hypertrophy of the muscle fibres is a slow process, needing regular and intense strength training for more than eight weeks. With increased resistance training, hypertrophy may continue for years, and a long training period is therefore needed to increase the muscle volume. The data showed that eight of the incontinent women were cured one year postpartum, six of them after a prolonged exercise period. The five women with incontinence 16 weeks after delivery were still incontinent at the one-year follow up. None of these women had followed the training program after completing the period of supervised training, and neither had the eight additional women reporting urinary incontinence at the one-year follow up test. Therefore, the question as to why the exercises did not prevent urinary leakage or cure it in all women in the training group may be due to a too short period of intensive pelvic floor muscle exercise. Follow up urodynamic studies may have detected whether the leakage was due to intrinsic sphincter deficiency or urethral hypermobility. Other possible explanations why some of the participants in the training group still was incontinent one year after delivery may be severe damage to the pelvic floor during delivery (e.g. peripheral nerve damage or rupture of muscle fibres and/or connective tissues or over-stretching of supporting ligaments). However, once satisfactory levels of muscle strength have been attained, the results may be maintained with a reduced training frequency of two exercise sessions per week. Also Graves et al found that muscle strength might be maintained for short periods of time with a training frequency of once per week as long as the intensity is kept constant.

Women in the postpartum period seem to need strong motivation and close follow up if exercise is to be maximally effective. This is consistent with findings reported by Ashworth and Hagan. They analysed the social consequences of noncompliance with pelvic floor muscle exercise and reported that women told to train the pelvic floor muscles found that the exercises were not personally salient and not easily adopted as a personal project. The exercises focus on an area of the body which is not easy to control consciously.

A significant public health issue therefore would be to build strategies for encouraging women to talk about postpartum morbidity, and search for effective prevention and treatment strategies. It is essential that future services for women after childbirth should be organised according to results from controlled clinical trials.

In conclusion, this one year follow up study demonstrates that a specially designed eight-weeks postpartum pelvic floor muscle training course was effective in the prevention and treatment of stress urinary incontinence. The benefits from pelvic floor muscle training are still present one year after delivery.