From Technology to Operational Efficiency – An New Era of Physiotherapy Management on Continence Care Program

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Introduction
Pelvic floor muscle training (PFMT) is widely advocated as a first-line conservative therapy for women with urinary incontinence. Waiting time is increased due to increased demand. Vaginal palpation (PV) is a standard biofeedback training. However, not all patients are suitable for PV due to contraindications. PFMT with PV is also time-consuming. It involves detailed explanation to patients for informed consent, patient's acceptability and infection control preparation. Transabdominal real-time ultrasound imaging (RUSI) is increasingly used as another form of biofeedback for PFMT, due to its convenient application with good reliability and validity.

Objectives
Phase 1: To evaluate if PFMT using RUSI is as effective as PV. Phase 2: To evaluate the effectiveness of the new enhanced program (爽健新姿) using RUSI for PFMT.

Methodology
Phase 1 Patients referred to our department for PFMT from May 2012 to January 2013 were included. After group education class, patients were randomly assigned into either RUSI group or PV group. Those assigned to PVG but were found to be contraindicated to PV were re-arranged to join the RUSIG. Phase 2 Starting from February 2014, a new enhanced program (爽健新姿) was launched. Selected patients were arranged to watch a well-structured video which was designed with details on PFMT using RUSI. It was then followed by individual RUSI for PFMT.

Result
Phase 1 33 patients were included in Phase 1. 100% RUSIG patients (n=16) were
able to complete the training while 35.3% PVG patients (n=17) were contraindicated for PV and were transferred to RUSIG. There were significant improvement in incontinence severity level (p ≤ 0.002), stress incontinence episode per week (p ≤ 0.016), pelvic floor muscle strength (p ≤ 0.027), short form of Incontinence Impact Questionnaires (p ≤ 0.002) and short form of Urogential Distress Inventory (p ≤ 0.025) in both RUSIG and PVG. Phase 2 By using RUSI with the educational video, each training session can be shortened from 1 hour to 30 minutes. Patient took less time to learn, could understand better and hence could perform better with the exercise. The capacity for patient intake was increased by 80%. The waiting time was markedly decreased by 3 months. 100% of patients in the new enhanced program were satisfied with the new program and found RUSI a practical tool in PFMT. Conclusions Phase 1 Both RUSI and PV are effective biofeedback for PFMT in women with urinary incontinence but RUSI has a higher application successful rate with less time required. Phase 2 The capacity and waiting time were markedly improved in the new program (爽健新姿) with good patient’s satisfaction.