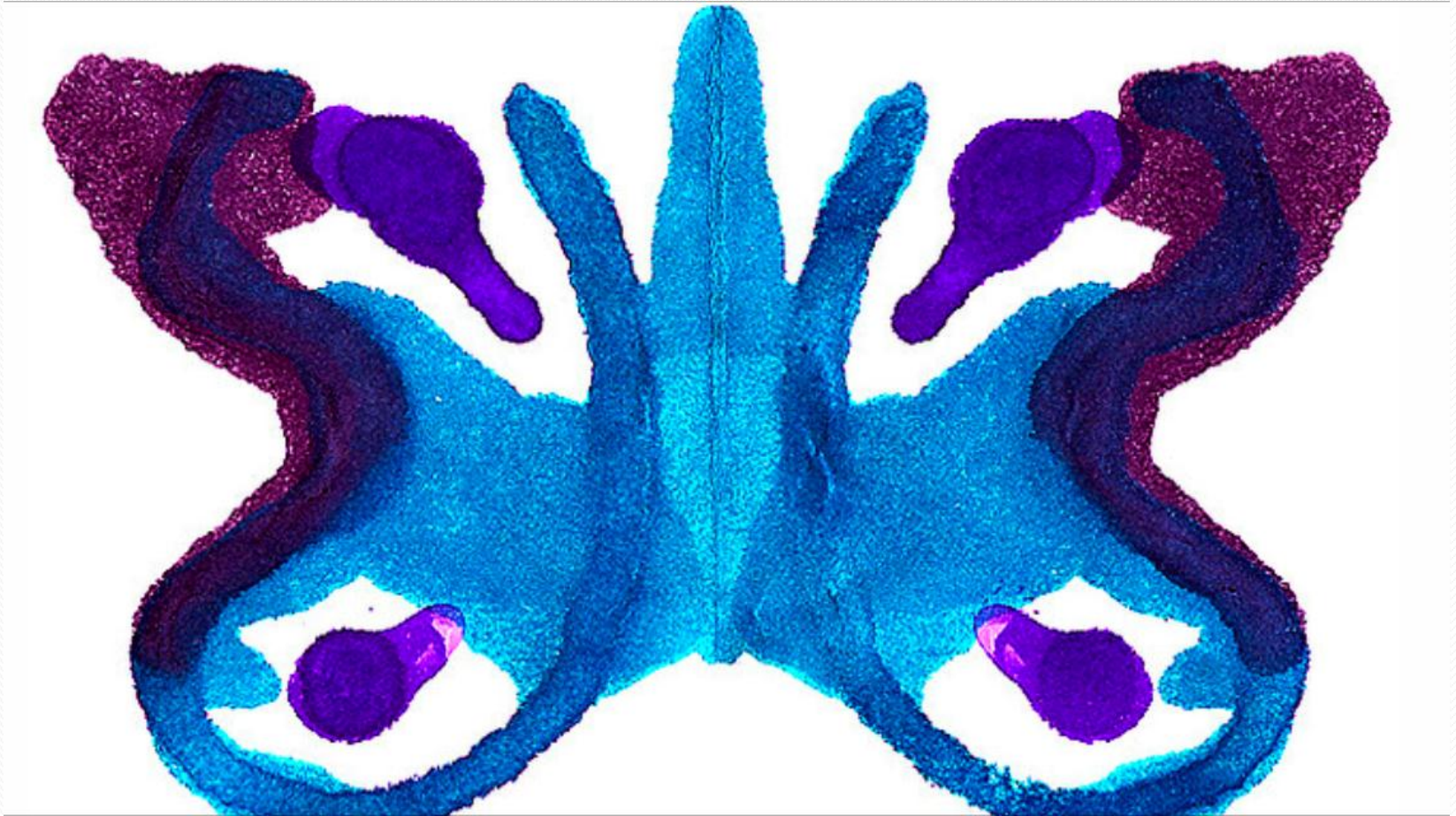


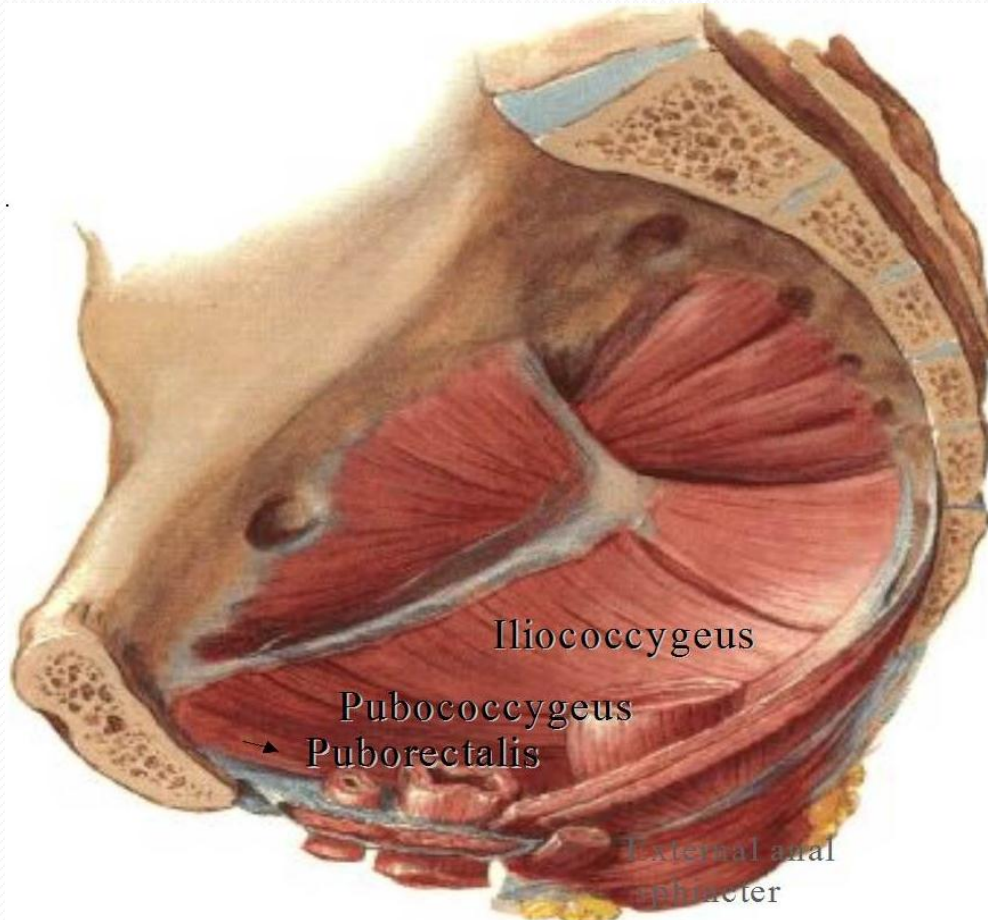
The Art and Science of Managing Pelvic Floor Dysfunction: A New Level of Technology Application

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Physiotherapist I
Kwong Wah Hospital

What can you see?



Role of pelvic floor muscle



Maintenance of
Continence

Support of
pelvic organs

What is pelvic floor dysfunction?

Urinary incontinence

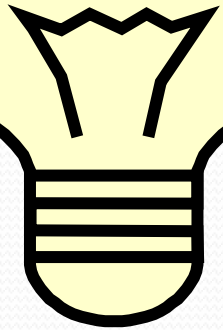
Voiding abnormality

Pelvic organ prolapse



Urinary incontinence/voiding dysfunction

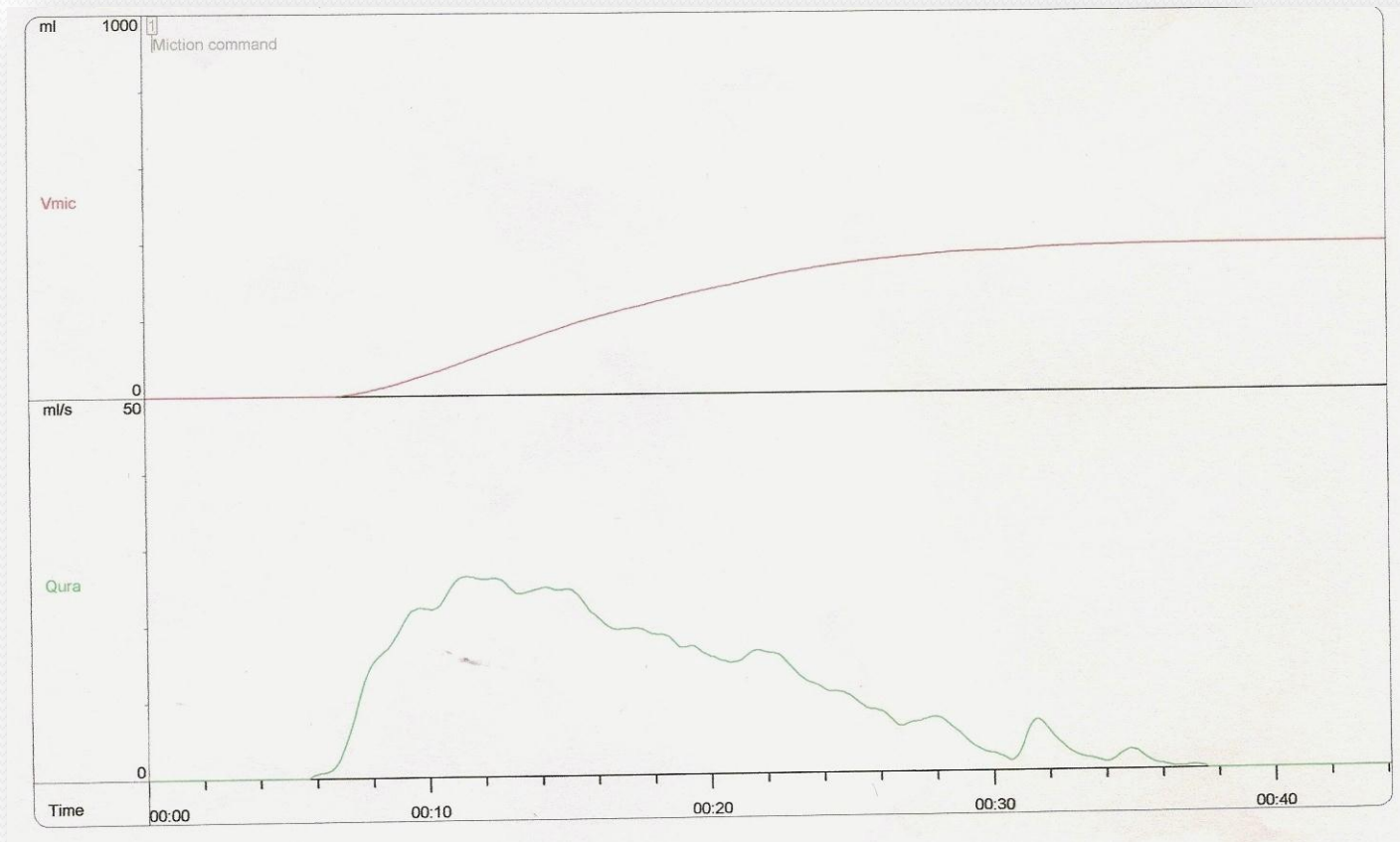
How to
diagnose?



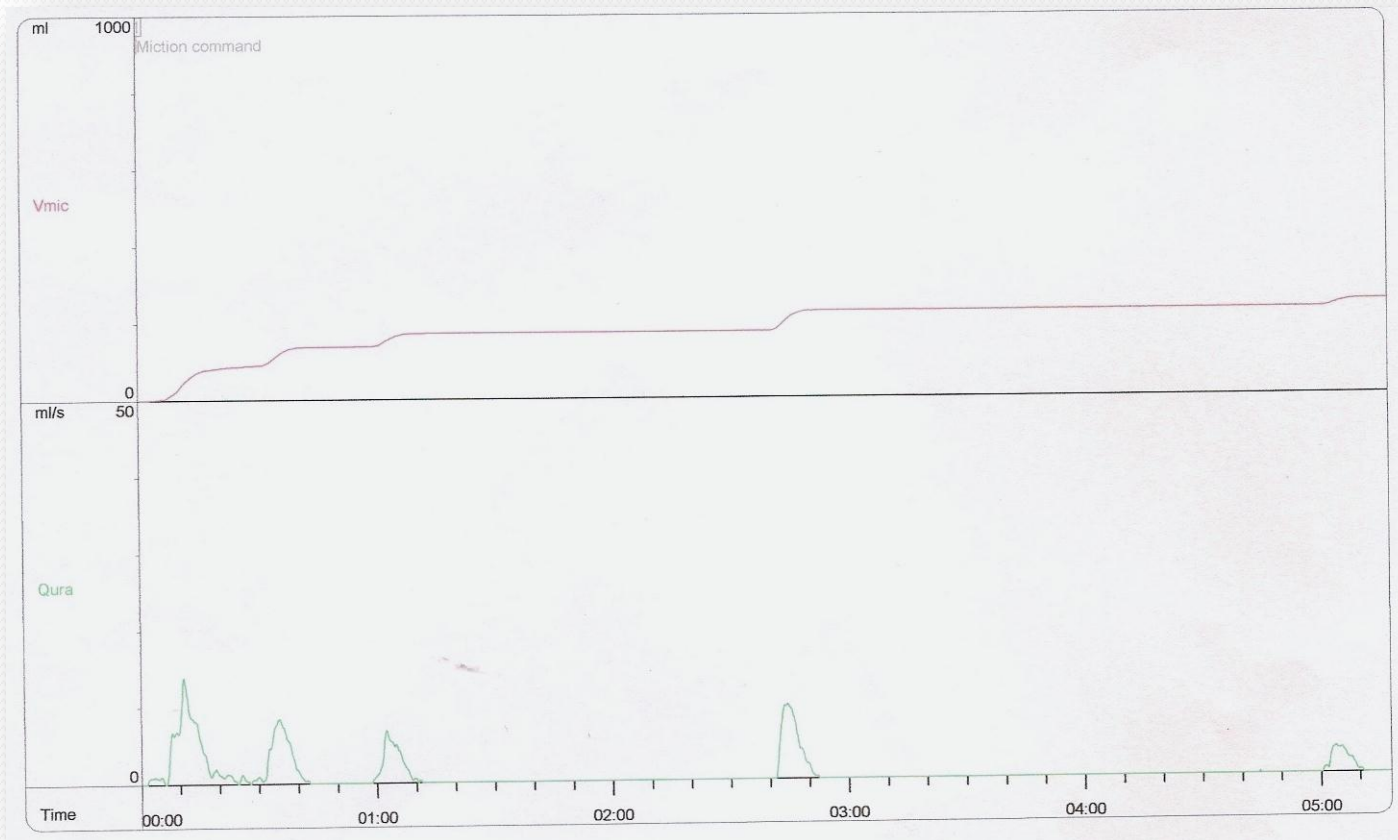
coughing



Normal uroflow

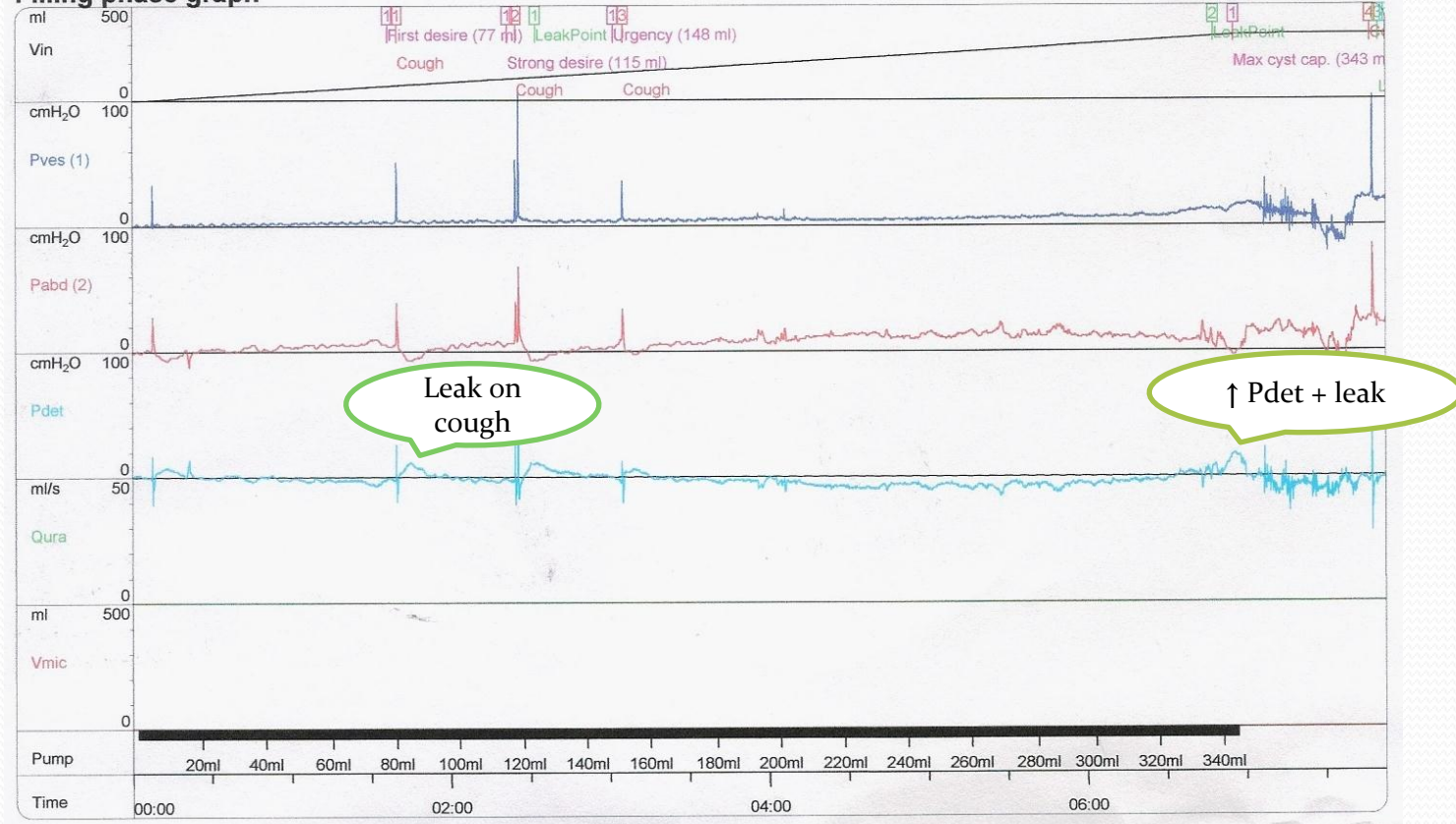


Hypocontractile bladder



Overactive bladder + genuine stress incontinence

Filling phase graph



Real time ultrasound

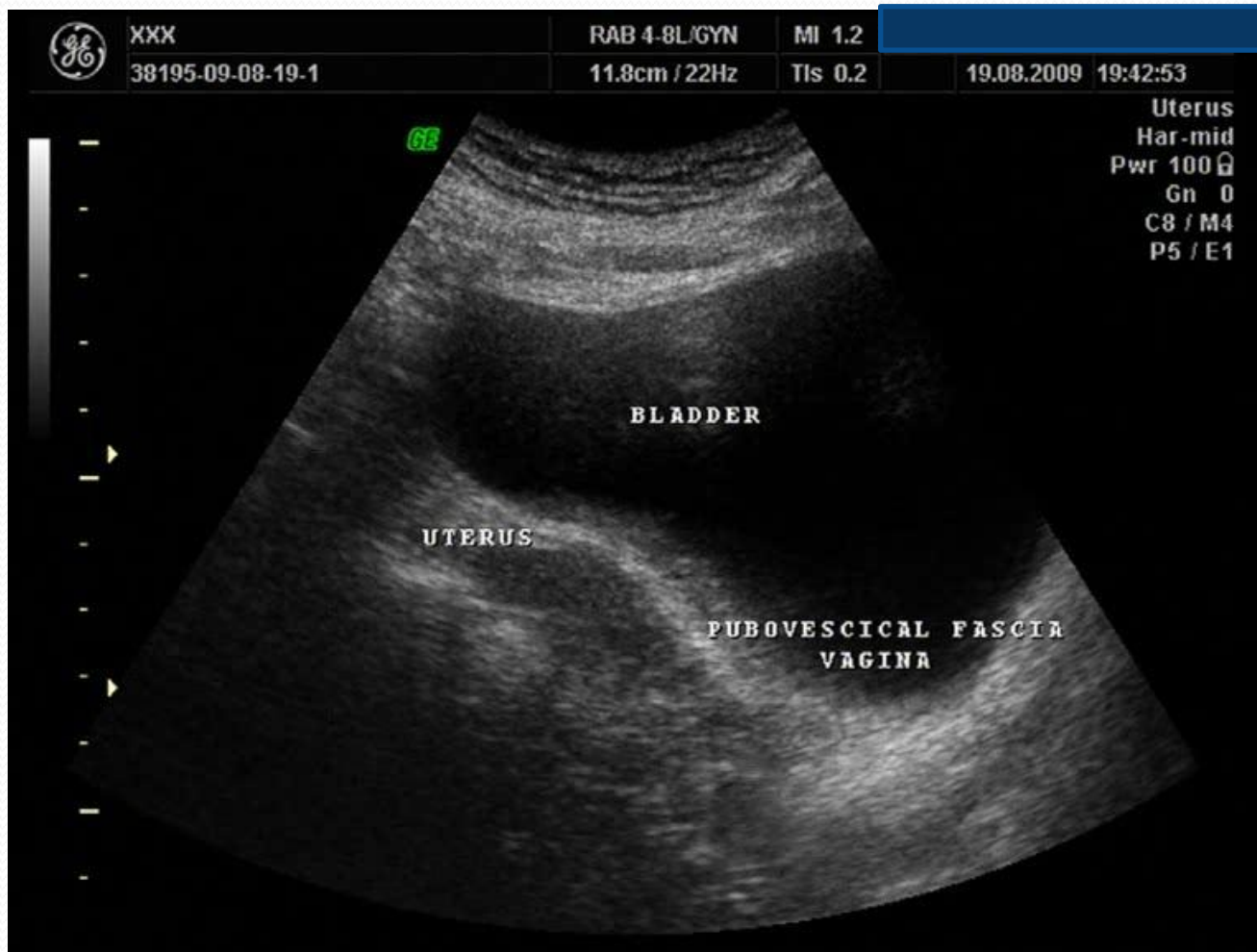


- Direct visualisation of the PFM contraction (Thompson 2005)
- Biofeedback method to teach the correct technique of performing PFM exercises (McKiernan 2010)
- ‘lifting’ contraction: quantify the amount of movement of the bladder base during PFM contraction (Thompson 2007)
- Co-activation of the abdominal muscles during PFM contraction exists in continent and stress incontinent women (Arab & Chehrebrazi 2011)

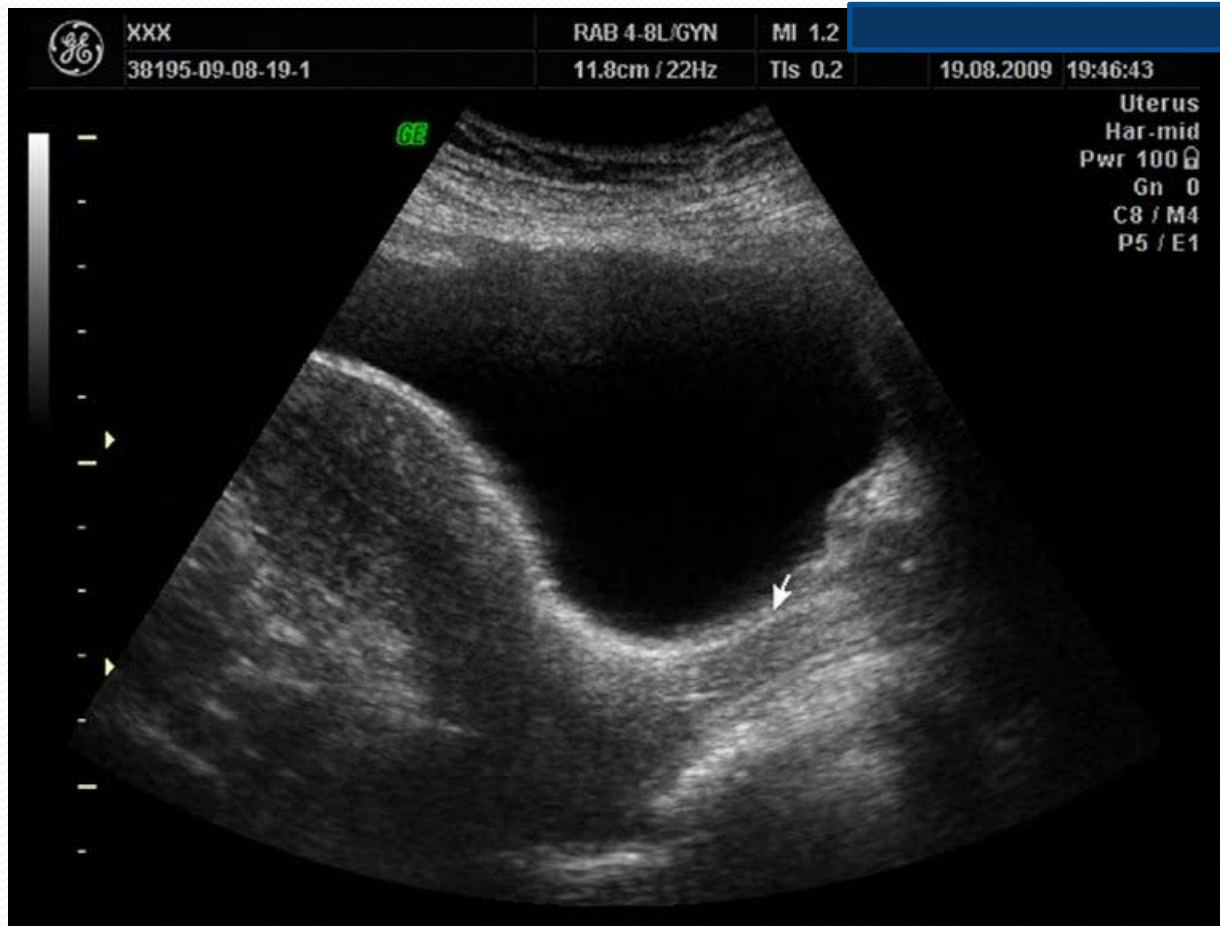
Real time ultrasound



Supra-pubic ultrasound for biofeedback



Bladder base displacement



Transabdominal ultrasound for biofeedback



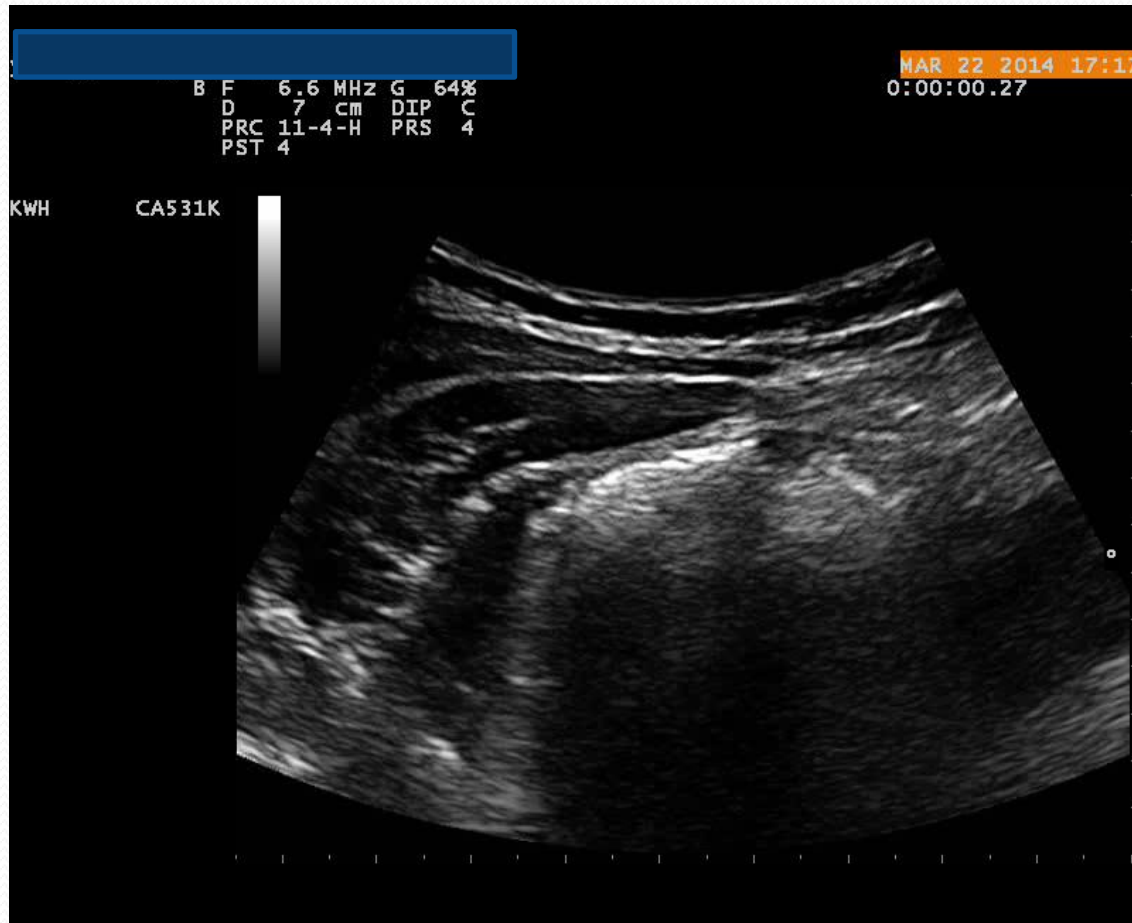
Transabdominal ultrasound for biofeedback



TrA contraction before training



TrA contraction after training



Rehabilitation is an art.....

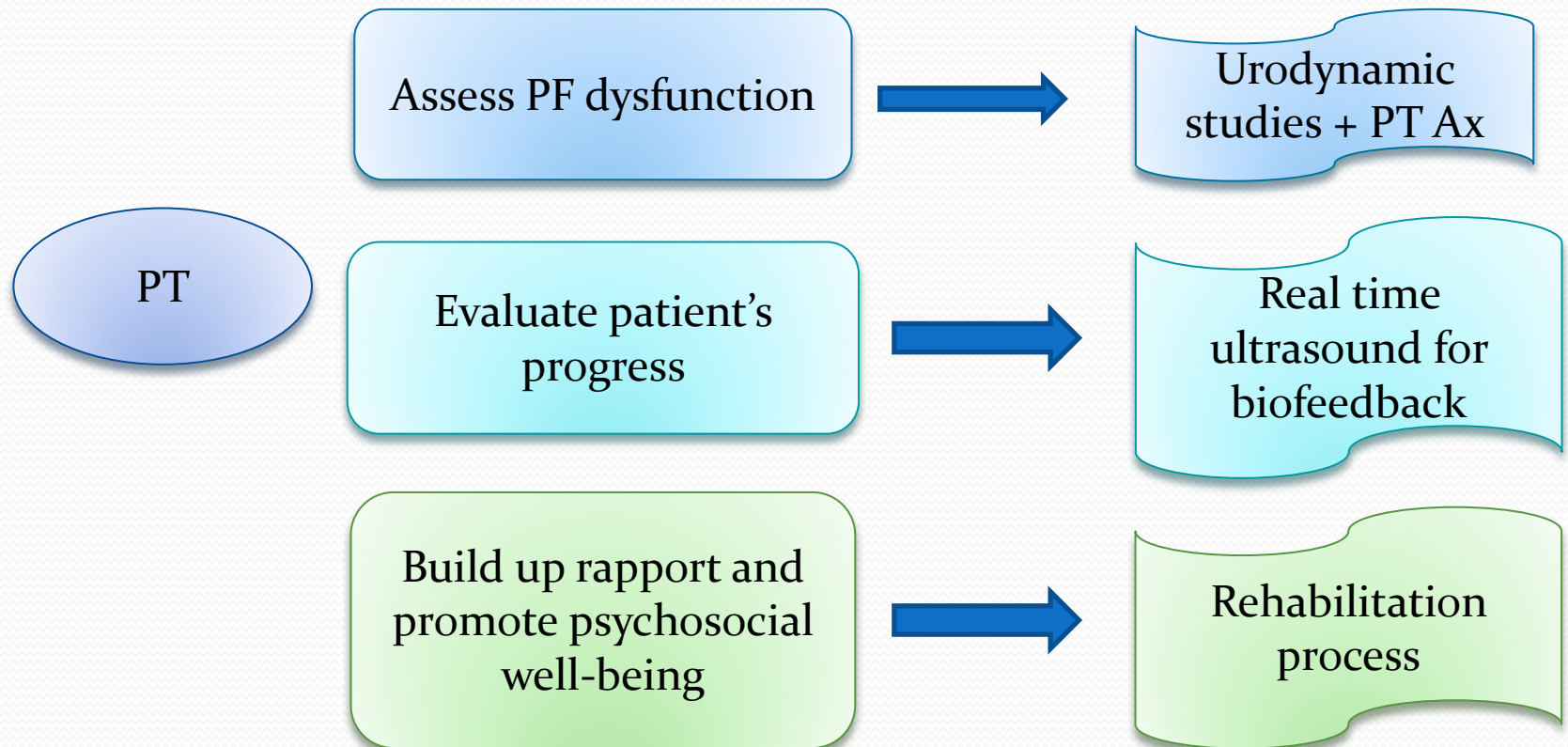
- Therapist-patient rapport: overcome embarrassment, enhance communication
- Motor re-learning process
- Hands-on facilitation to recruit appropriate muscle contractions
- Functional integration into daily life and behaviour modification



Rehabilitation on PF dysfunction



To summarize.....



The success.....

Advanced
technology



Rehabilitation process

Reference

- Arab AM, Chehrebrazi M. The response of the abdominal muscles to pelvic floor muscle contraction in women with and without stress urinary incontinence using ultrasound imaging. *Neurourology and Urodynamics* 2011;30:117-120
- McKiernan S et al. Diagnostic ultrasound use in physiotherapy, emergency medicine, and anaesthesiology. *Radiography* 2010;16:154-159.
- Thompson J et al. Assessment of pelvic floor movement using transabdominal and transperineal ultrasound. *Int Urogynecol J* 2005;16: 285-292.
- Thompson J et al. Comparison of transperineal and transabdominal ultrasound in the assessment of voluntary pelvic floor muscle contractions and functional manoeuvres in continent and incontinent women. *Int Urogynecol J* 2007;18:779-786.



Thank you