

Mechanical support of the posterior fornix relieved urgency and suburethral tenderness

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Abstract: Supporting the posterior vaginal fornix with a speculum blade relieved urgency and suburethral tenderness, the latter consistent with the hypothesis of referred pain from lax uterosacral ligaments.

Key words: Simulated Operation; Virtual Operation; Pelvic pain; Suburethral Tenderness.

INTRODUCTION

We report an unexpected finding, relief of suburethral tenderness on mechanical support of the posterior vaginal fornix.

The concept of mechanical support of specific ligaments, was originally introduced to challenge the Integral Theory which stated that stress and urge both derived, for different reasons, from laxity in the vagina or its supporting ligaments.

The midurethral pressure test,¹ (VIDEO 1), tests pubourethral ligament laxity: pressing upwards on one side immediately behind the pubic bone, prevents loss of urine during coughing in women with urinary stress incontinence (USI); it also restores vesicourethral geometry from a funnelled to abnormal shape.¹

Not so well known are the tests for the origin of urgency. The midurethral pressure test for PUL laxity also controls urgency symptoms in up to 50% of patients who also have USI, (VIDEO 2). Another “simulated operation” for urgency is to gently support the bladder base digitally to diminish urge symptoms (VIDEO 2). The anatomical rationale for these “simulated operations” for urgency is that mechanically supporting the lax ligaments restores the insertion point and therefore, optimum contractility to the directional muscle forces¹ which stretch the vaginal membrane for hypothesized support of the bladder base stretch receptors, “trampoline analogy”.

PATIENTS AND METHODS

In October 2012, a 49 year old patient with 2nd degree uterovaginal prolapse attended the Shanghai Jiaotong University affiliated 6th Peoples hospital OPD. She com-



Video 1. – Link for the video: www.pelviperineology.org



Video 2. – Link for the video: www.pelviperineology.org

plained of lower abdominal pain (relieved on lying down), frequency and urgency. This patient had anterior vaginal repair 6 years ago, because of 2nd degree cystocele and severe urgency. After the procedure, her symptom of urgency improved, but the symptoms recurred two years ago.

She was assessed using the Pictorial Algorithm, (Figure 1); 2nd degree uterovaginal prolapse was confirmed, the symptoms suggesting uterosacral ligament laxity. During vaginal examination, extreme tenderness was noted in the suburethral area of vagina immediately below the urethra. There was no hypersensitivity in the hymenal area on testing for vulvodynia. Gentle insertion of the posterior blade of a Cusco speculum into the posterior fornix relieved the feeling of urgency and the suburethral tenderness. The test was repeated twice, each time with the same findings.

DISCUSSION

It has been previously demonstrated that injecting local anaesthetic (LA) in the distal site of the uterosacral ligaments (USL) relieved vulvodynia, lower abdominal pain,² and suburethral pain,³ giving some support to the hypothesis⁴ that lower abdominal pain and the pain of vulvodynia may be referred pains from the inability of lax USLs to support the pain fibers contained within the nerve fibers which are stretched by the force of gravity to produce pain; one clinical characteristic of such pain is relief on lying down. We hypothesize the relief of pain in this case was due to speculum support of the apex/ distal USLs.

One criticism levelled at this referred pain hypothesis was that the pain arose from the organ itself and that the LA

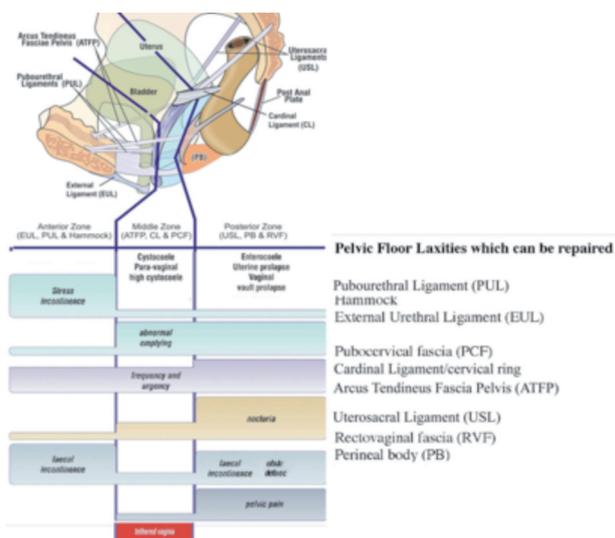


Figure 1. – The **Pictorial Diagnostic Algorithm** summarizes the relationships between structural damage (prolapse) in the three zones and function (symptoms). The size of the bar gives an approximate indication of the prevalence (probability) of the symptom. The symptoms of this patient suggested USL laxity. .

simply anesthetized the afferent pain fibres (S2-S4) from the organ which traverse the USLs.⁵ This criticism did not explain relief of pain in the lower abdomen which had a different innervation, the ilioinguinal nerve, T12, L1, nor can it apply to this case.

CONCLUSION

This accidental finding appears to provide some support to the hypothesis of referred pain caused by USL laxity. We hope this report may unlock another avenue for investigation for this difficult problem.

VIDEO 1 Courtesy Professor Palma, Brazil

VIDEO 2 Courtesy Dr Monteiro, Portugal

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