

# PHYSIOTHERAPY FOR WOMEN WITH RECURRENT URINARY TRACT INFECTION: A PROMISING APPROACH

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## HYPOTHESIS / AIMS OF STUDY

Urinary tract infection is the second more common infectious disease in women worldwide and its recurrence rate is high [1]. This condition may reduce patient's quality of life once it imposes limitations on daily living activities and restricts social participation. The aim of this study is to describe a case series of women diagnosed with recurrent urinary tract infection (RUTI) who underwent physical therapy (PT) intervention.

## MATERIALS AND METHODS

This is a case series reporting positive effects of PT intervention on twelve women diagnosed with RUTI, defined as having three or more symptomatic infections over the last 12 months [2]. All patients were referred to pelvic floor physiotherapy by their urogynecologist. PT treatment were delivered once, twice, three times a week or monthly, according to clinical and functional diagnosis by the same physical therapist, with 32 years of experience in the treatment of pelvic floor dysfunctions. Treatment comprised of:

1) reeducation of pelvic floor muscle (PFM) function using kinesiotherapy, manipulative techniques, local heat, breathing and relaxation exercises, according to the pelvic floor muscle function diagnosis; 2) postural education aiming at the assumption of adequate posture that favours bladder emptying; 3) reeducation of muscle coordination between pelvic floor and abdominal muscles in order to guarantee that, while the first relax, the second contract isometrically, favouring micturition; 4) behavioural therapy aimed at organizing the micturition frequency and liquid intake over 24h as well as at the improvement of bowel habits; 5) orientation/certification of adequate hygiene habits of genital region; 6) treatment of associated pelvic floor dysfunction such as anal and urinary incontinence and dyspareunia [1]. Women were treated whenever signs and symptoms of urinary tract infection were absent, even though they may have presented a positive bacteriuria.

## RESULTS

All the twelve women had been previously treated through medication but with no success in effectively controlling the RUTI episodes. None of them had been through PT intervention before. Clinical status of sample are presented in Table 1. Table 2 presents treatment period. Clinical characteristics concerning pelvic floor dysfunctions before and after treatment are shown in table 3. The pelvic floor muscles (PFM) diagnosis [3] was identified as shown in table 4. All, but one, women were committed to treatment. They regularly did the exercises at home and/or during their regular physical activities. They were also compliant to behavioral therapy. All of them have been discharged from regular physiotherapy, but were kept under follow up of 3 or 6 month intervals depending upon clinical and functional status.

Table 1: Sample clinical status

Characteristics	Data
Age	28-88years (median=64.5; IQD=14.3)
Pregnancies	2.5
Vaginal delivery	74.7%
Nuliparous	1
Pelvic surgeries	33.2% (3 hysterectomies, 2 cistopexies, 1 Sling, 1 Colpocleise, 2 hemorrhoidectomies, 1 perineoplasty)
UTI duration	Median 5 years (IQ=2.5)

Table 2: Treatment period

Treatment aspects	Data
Sessions	4 – 42 (median=5.5; IQD=4.3)
Time period elapsed from 1st to last session	4-45 months (median=28.5; IQD=7.5)

Table 3. Pelvic floor dysfunction characteristics of participants pre and post treatment

Clinical Characteristics	Pre-treatment	Post-treatment
Medication intake	Macrodantin=58.1% Cranberry=33.2%	Macrodantin=16.6% Cranberry= 33.2%
Pelvic Floor Dysfunctions		
Asymptomatic	-	66.7%
Urgency	100%	-
Urgency UI in the morning	-	8.3%
SUI	33.2%	-
Full bladder SUI	-	8.3%
AI	41.5%	-
Soiling	-	8.3%
Constipation	16.6%	-
Sexual dysfunction	49.8%	-
Mild dyspareunia	-	25%
POP	8.3%	8.3%
UTI episodes in 12 months before/during PT	3-12 (median=4.5;IQD=3.5)	0-3 (median=0; IQD=1)

Table 4. Pelvic floor muscle functions before and during treatment

PFM functions	Pre-treatment	Post-treatment
Power	Median=1.8; IQD=1.1	Median=2.8; IQD=1.1
Endurance	Median=3 sec; IQD=3.3	Median=10 sec; IQD=4.8
Control/Coordination (relaxation deficiency, synergistic activity)	50%	9.3%
Tone		
Increased	28.3%	8.3%
Reduced	16.7%	-

## INTERPRETATION OF RESULTS

Results were encouraging once PT intervention, as an adjunct therapy, has reduced the occurrence of RUTI episodes as well as medication intake. The possible reasons for these results were the increased efficiency in bladder emptying, associated with reduction in the contaminated environment due to the treatment of pelvic floor dysfunction, as well as to the improvement of the PFM functions. Our clinical experience suggests that commitment to PT treatment by regularly following all behavioural instructions are a *sine qua non* condition for the treatment success.

## CONCLUDING MESSAGE

The physiotherapy approach for pelvic floor muscle function rehabilitation leading to an increase in the efficiency of emptying bladder, and to an improvement of pelvic floor dysfunctions, as an adjunct therapy to medical treatment, is a conservative and effective approach in RUTI. Such promising results lead the hospital team of urogynecologists and physiotherapists to develop a RUTI protocol treatment which includes pelvic floor muscle function rehabilitation to be implemented as a routine. Regular follow ups (3 to 6 months) with a physical therapist specialist in the treatment of pelvic floor dysfunctions are necessary to guarantee permanent behavioral and functional benefits from this treatment. Future studies with higher level of evidence should be developed to corroborate the results presented here.

## References

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