



Effects of Laser Therapy on Recurrent Cystitis

Hirokazu Abe, MD, Ph.D

Introduction: This study investigates the effectiveness of laser therapy in preventing the recurrence of chronic and recurrent cystitis, which is prevalent among postmenopausal women and often challenging to treat. The emergence of resistant bacteria can necessitate hospitalization and, in cases of sepsis from urinary tract infections, may lead to fatal outcomes. Focusing on the immune mechanism of the genital area, this study explores whether laser treatment can suppress the recurrence of cystitis. We report on 20 cases with a history of cystitis treatment more than twice in six months who underwent laser therapy.

Laser	Fotona TimeWalker IntimaLaser®		
	Step 1 (RenovaLase®)	Step 2 (RenovaLase®)	
Handpiece	GRA-FG	GRD-PR	
Spot size / Fiber tip	9 mm	7 mm	
Energy / Fluence	1.7 - 2.2 J/cm ²	10 J/cm ²	
Mode/Pulse	SMOOTH	SMOOTH	
Frequency	3.3 Hz	1.6 Hz	
Passes/Repeats	3 passes	4 passes	
Sessions	3 sessions with one month intervals		



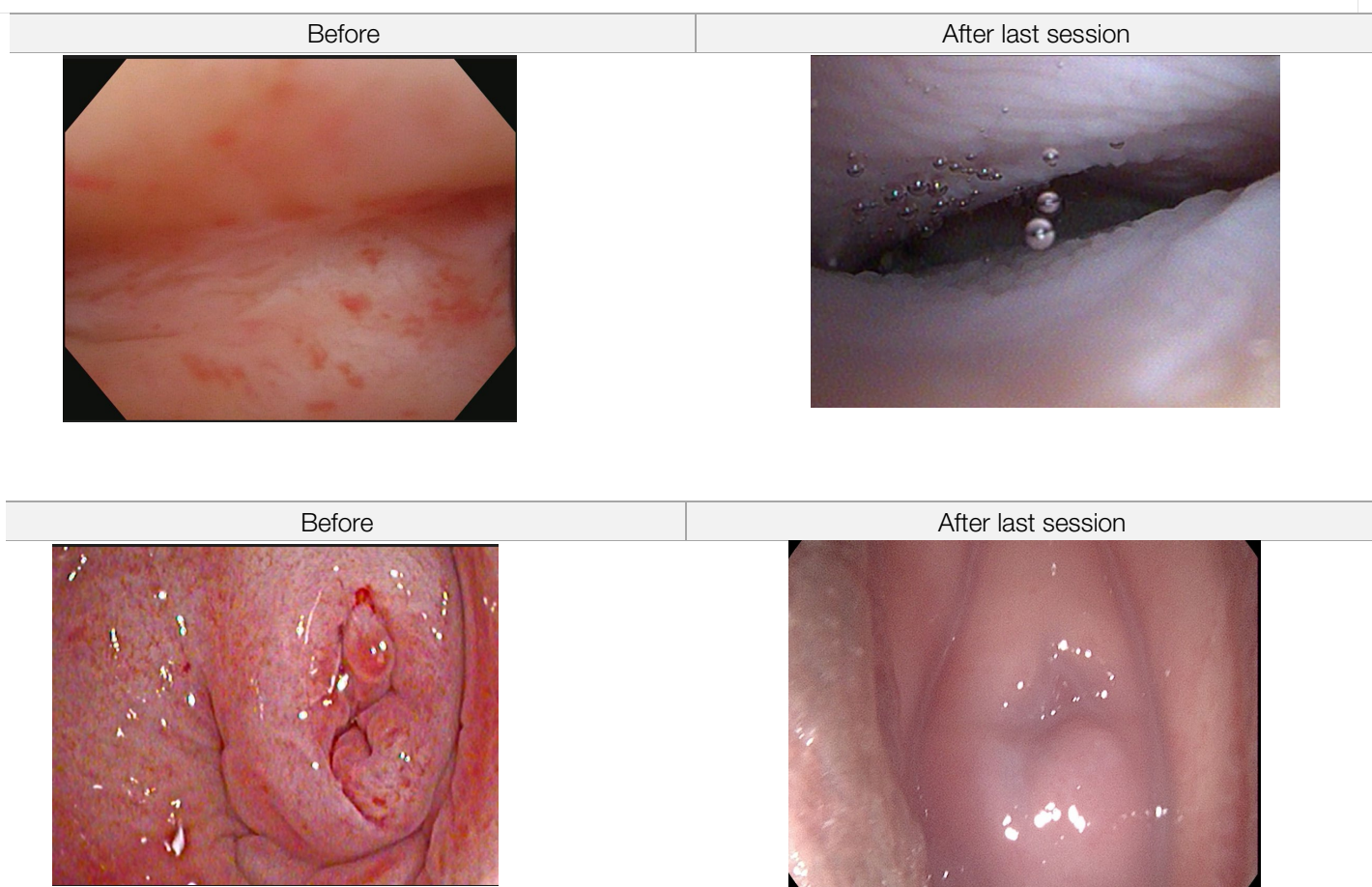
Dr. Hirokazu Abe graduated from Osaka Medical College in Japan with specialization in urology and female urology, and obtained his Ph.D in male infertility from the same college in 2005. Dr. Abe has been working as the director of the Department of Urology in the Kameda Medical Center and has also been working as the director of Nihonbashi pelvic floor clinic since 2023.

CLINICAL CASE:

Subjects and Methods: The subjects had an average age of 63.2 years (range 48-87) and an average illness duration of 6 months to 5 years, with a vaginal pH of 7.2 (range 6-8.5). The treatment plan included moisturization and, in some cases, local hormone therapy. The laser treatment, using the RenovaLase® mode, was administered three times at one-month intervals.

Results: Improvement in vaginal pH was observed in all 20 cases. The average pH decreased to 5.6 (range 4.5-6.0). While two cases experienced a recurrence of cystitis within three months, no recurrence was observed in 18 cases for over six months.

Discussion: Normally, a microbiota forms in the genital area, maintaining a pH below 5, which prevents the colonization of bacteria such as *E. coli*. However, the atrophy of vaginal mucosa following menopause can lead to a decrease in microbiota activity due to dryness, resulting in an alkaline pH. This makes the area around the urethra constantly exposed to various bacteria. Laser treatment is thought to regenerate the mucosa, restore moisture, activate the microbiota, and lead to acidification of the pH. We believe laser therapy is an indispensable treatment method for recurrent cystitis in postmenopausal women.



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