ORIGINAL ARTICLE

Tension-free transobturator vaginal tape for stress urinary incontinence correction: a report at 2-year follow-up

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ABSTRACT

Introduction: The present study carries out correlation and follow-up of patients with urinary incontinence treated with tension-free transobturator vaginal tape for stress urinary incontinence in the department of urology at the *Hospital Ángel Leaño*.

Objective: To report the experience at two years after stress urinary incontinence treatment with placement of tension-free transobturator vaginal tape.

Methods: A total of 43 patients presenting with stress urinary incontinence, with or without pelvic floor defects, were treated with placement of polypropylene tape through transobturator approach with follow-up at one, three, six and twelve months for two years.

Results: All patients had good progression and were continent. In regard to complications, there was tape extrusion in 2 patients, *de novo* urgency in 11 patients, incontinence recurrence in 1 patient, and bleeding in 2 patients. Surgery duration was from 7-17 minutes.

Conclusions: The use of transobturator tape for urinary incontinence correction is a rapid, effective and safe technique with a low complication rate, making it an attractive treatment option.

RESUMEN

Introducción: El presente estudio hace una correlación y seguimiento de pacientes con incontinencia urinaria en el servicio de urología del Hospital Ángel Leaño, que fueron tratados con cinta vaginal trans obturadora libre de tensión para la incontinencia urinaria de esfuerzo.

Objetivo: Informar la experiencia a dos años del tratamiento de la incontinencia urinaria de esfuerzo, mediante la colocación de la cinta vaginal trans-obturadora libre de tensión.

Método: Se incluyen 43 pacientes con incontinencia urinaria, de esfuerzo y con o sin defectos del piso pélvico, que fueron tratadas colocándose cintas de polipropileno mediante un abordaje trans obturador y seguimiento al mes, tres, seis y anual por dos años.

Resultados: encontramos que todas las pacientes presentaron una buena evolución y continentes. Como complicaciones se presentaron etrución de la cinta en dos pacientes y la urgencia *de novo* en 11 pacientes, recurrencia de la incontinencia en una, sangrado en dos. El tiempo operatorio fue de siete a 17 minutos para la corrección del anterior.

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Key words: Transobturator tape, urinary incontinence.

Discusión: La utilización de las cintas transobturador para la corrección de la incontinencia urinaria es una técnica segura, rápida y efectiva por lo consideramos que por su baja índice de complicaciones lo hacen una buena opción de tratamiento.

Palabras Clave: Cinta trans-obturador, incontinencia urinaria, México.

INTRODUCTION

Since 1999 when Petros and Ulmsten described their work on the theory of continence, based on the development of suburethral support, a new concept in minimally invasive surgery began to be developed for treating urinary incontinence due to urethral hypermotility.[1] Today tension-free vaginal tapes, called TVT, [1,2] are considered to be the most widely used urinary incontinence treatment with good results because of their facile placement and minimal invasiveness.[2] This soft polypropylene mesh is one of the most frequently used materials that provides reduced morbidity. [3] Among the most frequently reported complications are bladder injury, vascular injury, and urinary retention.[4] Transobturator sling procedure (TOT), developed by Delome, marked the beginning of a new, simpler, and innocuous form of treating this pathology. [3,5-7] The present study shows the authors' experience with the novel TOT technique performed in their hospital department.

OBJECTIVE

The objective of the present study was to report on the experience of stress urinary incontinence treatment with placement of tension-free transobturator vaginal tape (TOT) after two years.

METHODS

A total of 43 patients having undergone surgery for the treatment of urinary incontinence within the time frame of January 2002 and February 2006 were studied. All patients underwent physical examination and complementary urodynamic study. Age range was 36-74 years and patients with and without cystocele were included. For the surgical procedure patients were placed in dorsal lithotomy position and under epidural anesthesia, hydrodissection with 50% epinephrine was carried out with a 1.5 cm incision under the urethral meatus (**Image 1**). Dissection was done with curved

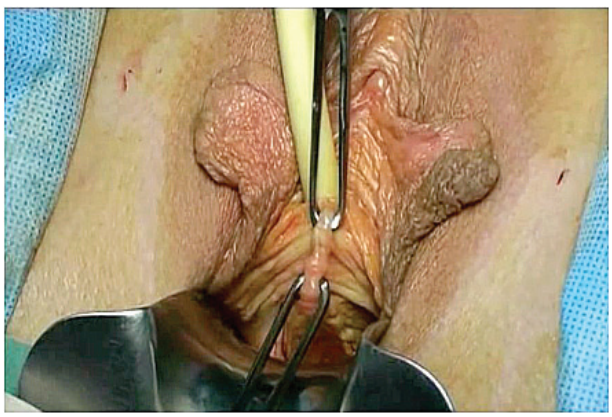

Image 1. Suburethral anatomical reference.

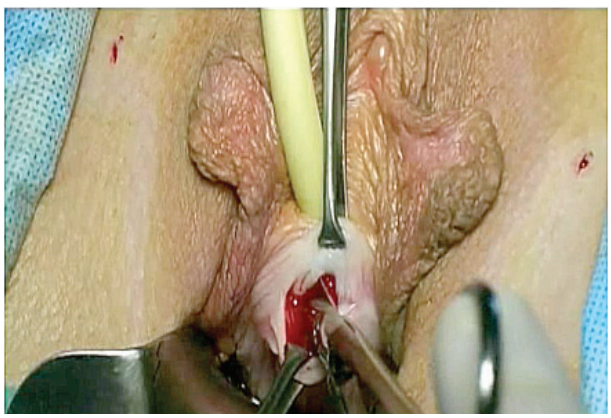

Image 2. Periurethral vaginal dissection, 2 cm deep, in the direction of the obturator branch.

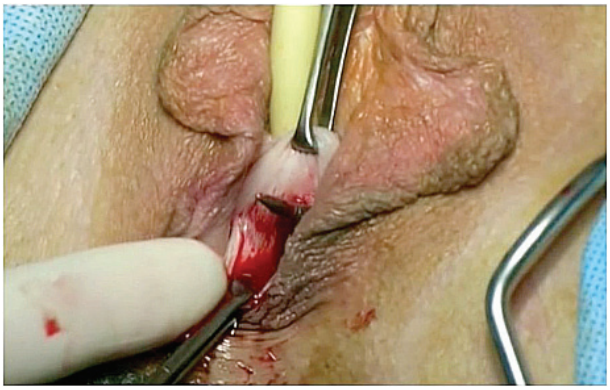

Image 3. Needle passing through the obturator opening.

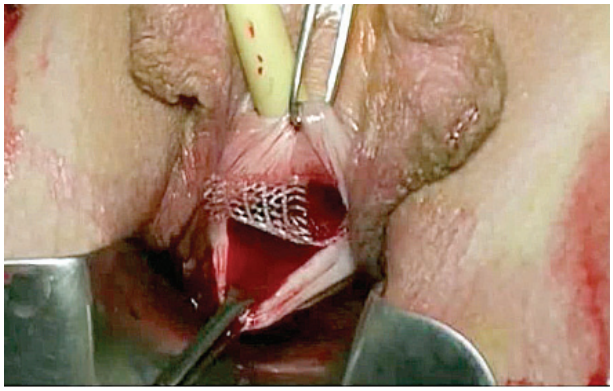

Image 4. Mesh passing through the middle urethra without tension.

scissors until bilaterally reaching the endopelvic fascia. Touching the superior ischiopubic ramus (**Image 2**), scalpel incision was made over an imaginary horizontal line from the clitoris to the femoral genital folds. The needle was then passed through the obturator opening until perforating the obturator membrane. Guided by the index finger the needle was pulled out through the vaginal incision (**Image 3**). The procedure was then performed contralaterally making sure the mesh was placed with no tension at the suburethral level of the middle urethra by placing a curved tweezer between the mesh and the urethra to release tension as much as possible (**Image 4**). Mesh cutaneous excess was cut and vagina was sutured with 2-0 chromic catgut.

RESULTS

Of the 43 patients that were operated on, 17 of them presented with preoperative pure stress urinary incontinence before the procedure. Fourteen patients presented with intrinsic sphincter deficiency and 12 with mixed urinary incontinence. Follow-up was carried out at 1, 3, 6, and 12 months for a period of 2 years. Intraoperative vaginal perforation presented in 7% of cases and was immediately resolved in all cases. Mesh extrusion presented in 2 cases and patients had to undergo another procedure for partial foreign body removal, but continence remained resolved. There were no cases of urinary retention or recurrent incontinence. Perineal pain presented in 23% of patients and disappeared within two months. Urinary urgency presented in 4% and disappeared at the third month and in 2 cases until one year. Procedure duration varied from 7-17 minutes.

DISCUSSION

The use of tension-free transvaginal sling has been widespread. However, there have been reports of bladder perforation, dysuria, and urinary retention, among others, with its application.[2,8] Since its introduction by Delome,[7] the tension-free transobturator vaginal tape approach has improved the risk of possible complications and is easier to perform. It is a new alternative that does not injure vascular, nerve, or intestinal structures,[4,5,8,10] and its reduced morbidity has been reported on in previous studies. [10,11] This minimally invasive transobturator approach used on patients presenting with low risk stress urinary incontinence does not require intraoperative cystoscopy and therefore is useful for patients with previous surgeries and morbid obesity, making it a highly attractive treatment.

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