



# Direct pubourethral ligament plication operation for cure of SUI- the next gold standard?

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## INTRODUCTION

This editorial concerns the urethral ligament plication (ULP) operation for cure of stress urinary incontinence (SUI) by direct repair of PUL (pubourethral ligament). The first publication of the ULP operation was 12 month data from a Pilot Trial in Pelviperrineology in 2024.<sup>1</sup> And the first RCT has just been accepted for publication in the official Journal of the International Urogynecology Association<sup>2</sup> <https://youtu.be/hf65CRFsJQU>.

The ULP operation is the ultimate demonstration of the 1990 Integral Theory discovery,<sup>3</sup> that bladder continence is externally controlled by pelvic muscles and ligaments, with collagen-deficient ligaments being the main cause of SUI. The ULP is based on the same etiopathology as the midurethral sling (MUS) and its underlying theory. Both fit Thomas Kuhn's description of a scientific revolution: These arrive suddenly from outside the existing field of continence knowledge, and are disruptive of existing "normal science".<sup>4</sup> As per Kuhn's criteria,<sup>4</sup> the underlying Integral Theory was simply stated (collagen based), falsifiable, and supported by 12 original scientific studies, including the experimental MUS, and a new surgical principle, using implanted tapes to create collagenous neoligaments.<sup>2</sup>

Even today, the best description of the 1990 revolution in SUI remains the prescient foreword of Ingelman-Sundberg,<sup>5</sup> eminent professor in the field, co-founder of IUGA, and former member of the Swedish Nobel committee for medicine (see <https://obgyn.onlinelibrary.wiley.com/toc/16000412/1990/69/S153>). Especially relevant are Professor Ingelman-Sundberg's concluding remarks, that this new direction would bring SUI cure to many more women with considerable savings in cost.

**Foreword** I by Axel Ingelman-Sundberg<sup>5</sup>  
*"To me it has always been obvious that in general the reason behind female urinary incontinence has to be looked for outside the bladder i.e., in the structures supporting the urethra and bladder neck-specifically ligaments, pelvic floor muscles and vagina. If symptoms of urinary incontinence arise from a dysfunctional anatomy in the aforementioned structures then function should come with restoration of anatomy. In addition to the above statement one must also recognize the close relationship between the genital organs and the lower urinary tract. In many textbooks expressed as the urogenital tract. The sophisticated interplay between the here mentioned organs and structures in relation to female urinary continence and incontinence has been properly addressed in this supplement. From*

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*the complicated anatomy and physiology of the female urogenital tract follows that careful reading and proper knowledge is necessary to understand the presented concept. Based on applied molecular biology, experimental and clinical research the authors have cast new lights on diagnosis and treatment of female urinary incontinence. This is very important as the intensive development of social urogynecology during the last decade has increased the number of women referred for operation. Unfortunately the number of hospital beds available for surgery has not increased to the same extent. We are therefore forced to develop an operative treatment, which is followed by only a few days of hospitalization or which can be made as an office procedure. The papers in this supplementum will give an excellent background for future work in this field".A. Ingelman-Sundberg, Professor, Karolinska Institutet.*

I see the ULP significantly extending the minimalist revolution commenced by the MUS in 1990, especially for disadvantaged nations. It requires minimal facilities and \$2-3 materials cost. Safer than the MUS, it transforms SUI surgery from a blind to a direct vision procedure. A single polyester suture prevents ligament extension and provides sufficient new collagen to reinforce weakened PULs.<sup>6</sup>

Already the ULP is spreading widely, even laparoscopically: <https://youtu.be/byNvJDcH67w>

It is early days, and much more data is required. However, as coinventor of the original midurethral sling, it is my considered view that the ULP may well become the next gold standard operation for SUI and this journal has been "in the driver's seat" from the very start.

**Keywords:** ULP operation; stress urinary incontinence; pubourethral ligament; integral theory

## FOOTNOTES

## DISCLOSURES

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## REFERENCES

1. Sivaslioglu AA, Mirzazada F, Hodgson R, Petros P. Urethral ligament plication operation (ULP) for minimal invasive cure of SUI without tapes. Pelviperineology. 2024; 43: 25-9.
2. Esercan A, Sivaslioglu AA, Petros PE. A randomized comparison of transobturator tape with the plication of urethral ligaments in the treatment of stress urinary incontinence. Int Urogynecol J. 2025. In press.
3. Petros PE, Ulmsten UI. An integral theory of female urinary incontinence. Experimental and clinical considerations. Acta Obstet Gynecol Scand Suppl. 1990; 153: 7-31.
4. Kuhn TS. The structure of scientific revolutions, 2nd edn. Chicago: IL: University of Chicago Press, 1996.
5. Ingelman-Sundberg A. Foreword I. Acta Obstet Gynecol Scand. 1990; 69(Suppl 153): 4-79.6. Petros P, Palma P. Conceptualizing stress urinary incontinence surgery beyond midurethral slings: very early results from simplified ligament repair without tapes. Neurourol Urodyn. 2023; 42: 383-8.