

The MERVAT (Minimally Invasive Extraperitoneal Retropubic Vaginal-Assisted Technique) allows complete removal of suburethral, retropubic sling arms or suture in cases of erosion, infection, or chronic pain when vaginal access alone is insufficient

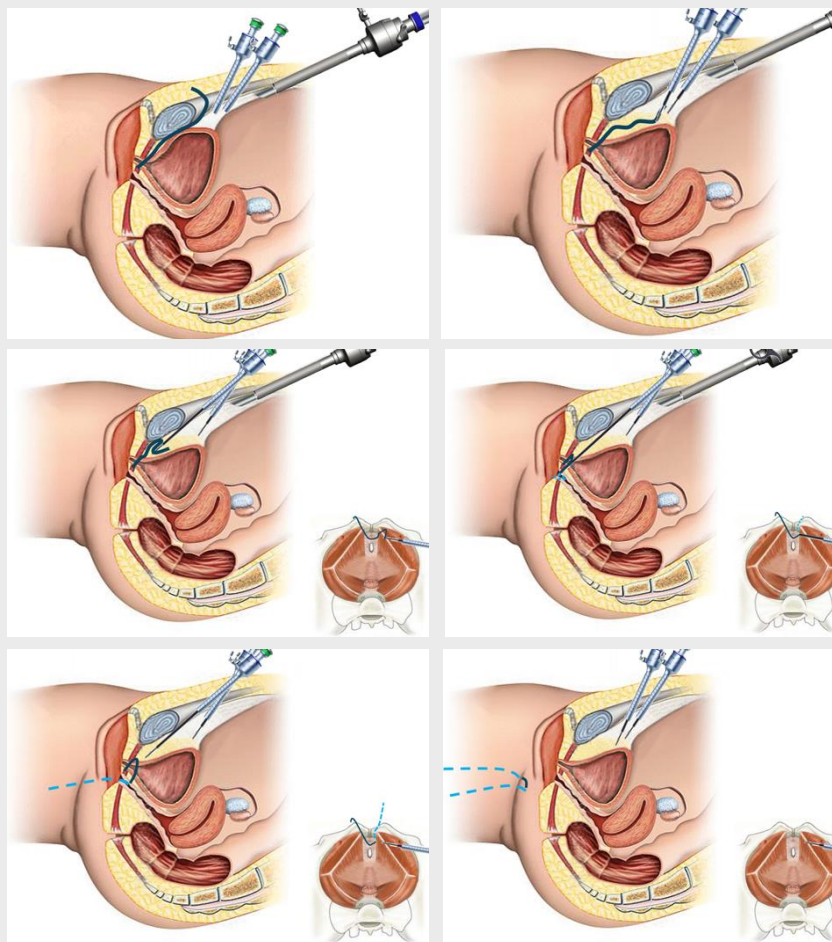


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Removal of TVT



HYPOTHESIS / AIMS OF STUDY

Tension-free vaginal tapes (TVT, TVTO) and colposuspension are established and effective procedures for treating stress urinary incontinence. However, severe and complex complications can occur, necessitating individualized surgical management. These include voiding dysfunction with or without residual urine, recurrent urinary tract infections, mesh erosions into the vagina, urethra, bladder or bowel, chronic pelvic pain, and fistula formation. Conventional techniques of partial vaginal mesh removal have not consistently resolved symptoms and may lead to recurrent urethral injury, chronic pain, or fistulation. To present a systematic management algorithm for complications following TVT/TVTO or colposuspension and to introduce the „MERVAT technique“ (Minimally Invasive Extraperitoneal Retropubic Vaginal-Assisted Technique) for complete removal of suburethral mesh, retropubic sling arms, or suture material.

STUDY DESIGN, MATERIALS AND METHODS

Depending on symptom pattern and type of complication, partial or complete mesh explantation was performed. Vaginal mesh excision was considered sufficient for isolated suburethral erosions, whereas complete removal of retropubic components is not achievable via the vaginal route alone. The MERVAT technique enables safe explantation of retropubic mesh arms through a minimally invasive, extraperitoneal approach while preserving adjacent structures.

RESULTS

A total of 74 patients (age 28–84 years, mean 57.5) treated between 01/2017 and 05/2025 were included. Implant dwell time ranged from 5 months to 33 years (mean 5.3). Explanted materials included: Dynamesh-SIS 7, TVA/SensiTVT 5, Serasis PP/PA 17, Gynicare TVT/TVTO 29, TVT/TVTO polypropylene (manufacturer unknown) 5, Advantage 4, Zoedler 1, Monarc 1; one self-constructed suburethral–retropubic mesh anchored with Prolene to Cooper's ligament; and four colposuspensions. The MERVAT technique achieved high success rates regarding complete explantation and symptom reduction, with low morbidity and short recovery time. Operating time ranged from 48–304 minutes (mean 122).

INTERPRETATION OF RESULTS

The MERVAT technique allows safe, complete removal of retropubic slings and mesh, even in complex or long-standing cases. It overcomes the limitations of conventional vaginal removal, achieving symptom relief with low morbidity and short recovery. These results highlight MERVAT as an effective approach for managing severe mesh-related complications.

CONCLUDING MESSAGE

The MERVAT technique is a safe and effective method for managing complex complications after TVT/TVTO procedures and for extraperitoneal removal of retropubic foreign material. It is particularly advantageous when complete sling removal is required and the vaginal approach is insufficient.

Removal of 2xTVT and 1xTVTO

