

IS PAIN RELIEF AFTER REMOVAL OF URETHRAL SLING AND/OR TRANSVAGINAL MESH FOR PROLAPSE DURABLE LONG-TERM?

Hypothesis / aims of study

Prior studies from our group and others on vaginal removal of synthetic slings and/or synthetic mesh kits for pelvic organ prolapse have indicated that 60-80% of women experience relief of related pain after such procedures [1-3]. Since many women have expressed concerns that the pain might return at a later time, and considering the lack of long-term data on pain relief, we reviewed our follow-up experience in women who reported initial pain resolution after removal of suburethral sling and/or vaginal synthetic mesh for prolapse.

Study design, materials and methods

Following Independent Review Board approval, charts of women who underwent vaginal removal of sub-urethral sling and/or synthetic mesh for prolapse due to pain and who reported pain relief at a minimum of 6 months post-operatively were included in this study. Data collected by a third party investigator from an electronic medical record included: demographics, past medical history, pain location, types of mesh/sling implanted, number of prior mesh/sling removal attempts, involvement in related lawsuits, indications for removal, responses to numerical pain rating scale (NPRS) (0: none to 10: terrible) administered by a blinded nurse at follow-up visits, responses to validated symptom questionnaires (particularly the 6-question Urogenital Distress Inventory or UDI-6, in which question 6 specifically addresses pain), and use of pain medications at follow-up.

Success was defined by continued resolution of pain, as assessed by: 1) score of ≤ 1 on UDI-6 question 6, 2) score of ≤ 2 on NPRS and/or 3) subjective report of pain-free status. Failure was defined as recurrence of pain in patients who underwent mesh for prolapse or sling removal after initial pain-free interval of at least 6 months. Site of recurrent pain, confounding factors such as urinary tract infection (UTI) or atrophic vaginitis, and recurrent pelvic pressure/pain from prolapse recurrence were also recorded.

Results

Between 2006 and 2015, 101 women met study criteria. Sixty-five were found to have suburethral sling only, 3 vaginal mesh for prolapse only, and 33 both. Twenty-nine patients had undergone prior sling or prolapse-related mesh removal attempt(s) at outside facilities. Mean follow-up after synthetic mesh removal was 28 (range: 6 to 99) months. Thirty-one patients were followed for longer than 3 years (range 3-9 years). Mean age at the time of surgery was 60 (33-88), with mean BMI 29 (17-47). Thirteen women were involved in mesh-related lawsuits. Mean interval between mesh/sling placement and removal was 54 (1-183) months. Of the 101 patients, 22 reported pain (determined by score of 2 or 3 on UDI-6 question 6, NPRS ≥ 3 , or subjective report) during follow-up. Of these 22, 11 had UTI-related pain, 2 prolapse-related discomfort, 3 atrophic vaginitis, 1 granulation tissue treated with silver nitrate, 1 generalized pain treated with methadone, and 1 abdominal pain from chronic cough secondary to allergies. These were not determined to be related to the original patients' synthetic device placement. Only 3 experienced delayed pain return related to their original synthetic device (Table 1).

Interpretation of results

Current literature on long-term persistent pain resolution in women who underwent synthetic suburethral sling and/or vaginal mesh kit removal and achieved an initial pain free-status is very limited. Our data suggests that, of those followed long-term and with resolution of pain after removal of their synthetic device at our institution, the great majority continue to experience a durable pain-free result. This information will be useful in patient counselling when reviewing long-term expectations after synthetic mesh removal placed for incontinence and/or prolapse.

Concluding message

At a mean follow-up of nearly 2.5 years, the original pain relief noted after vaginal synthetic mesh kit and/or suburethral sling removal, which was seen in 60-80% of our studied population, was durably maintained [1]. Most women with secondary pain issues, although fearing a return of their original mesh problems, were found to have unrelated pain mechanisms.

Table 1: Patients with recurrence of pain after experiencing pain-free interval following synthetic mesh or sling removal

Age at Time of Surgery	Type of Mesh	Location of Initial Pain	Pain-free Interval (months)	Location of Pain Recurrence	Interventions
53	Gynecare TVT-O	Dyspareunia Buttocks	46	Pelvic Perineal	Vaginal exploration with additional mesh removal
34	Miniarc	Dyspareunia Left perineal	28	Groin LLE	Physical medicine & rehabilitation referral
57	SPARC	Dyspareunia Pelvic pain	54	Pelvic vaginal	Removal of exposed sling in urethra with 5mm overlying stone

Key: TVT-O (tension-free vaginal tape – obturator). LLE (left lower extremity)

References

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