

Comparing the mid-term outcomes of rectus fascial slings with polyvinylidene fluoride Tape in the management of female stress urinary incontinence: A prospective cohort study after a 3-Years Minimum Follow-up

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Background:
 SUI is the most prevalent type of urinary incontinence among women.
 The EUA guidelines designate the MUS as the gold standard for surgical intervention. In comparison to polypropylene (PP), PVDF has reduced bending stiffness, prompts a milder inflammatory response in vascular sutures, and displays enhanced long-term biostability.
 We conducted a prospective cohort study to evaluate the effectiveness, success rate, and complication rate of PVDF Tape compared to traditional standard PVS using rectus fascia, with a mid-term follow-up of 36 months.

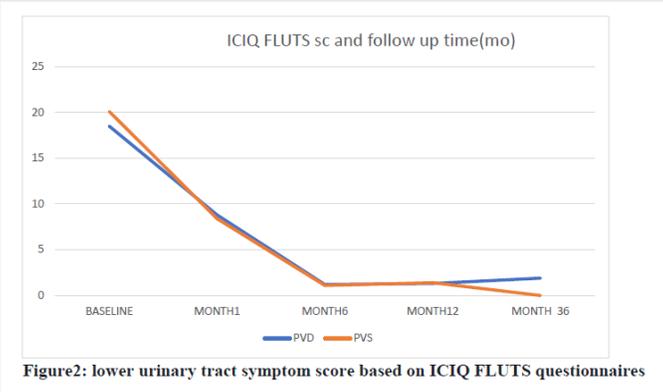


Figure2: lower urinary tract symptom score based on ICIQ FLUTS questionnaires

Methods:
 Data on the subjective success rate were collected by comparing the scores of the International Consultation on ICIQ_FLUTS LF at baseline and postoperative follow-ups.
 Objective outcomes were investigated by Pad test and cough test, too.
 The overall success rate and frequency of the complications, the incidence of each complication and severity of the complications based on the Clavien-Dindo classification were compared between the two groups after at least follow-up of 36 months

Results:
 The final analysis was based on 125 women, with 73 in the PVDF-sling group and 52 in the PVS group. The mean follow-up time was 41 months in the PVDF-sling group and 38 months in the PVS group. The operative duration was significantly lower in the PVDF-sling group.
 SUI disappeared or improved in more than 90% of patients in both groups, and these cure rates were similar to those obtained 1 year after surgery. Success rates were 93% in the PVDF-sling group and 94% in the PVS group.
 The overall complication rate was 47.2% in the PVS group compared to 25% in the PVDF-sling group. Grade 2 complications according to the Clavien-Dindo classification occurred more frequently in the PVS group. ICIQ FLUTS scores improved for both groups with no significant difference between about complications.

	PVDF (n = 73)	PVS (n = 52)	P value
Subjective success rate	72 (94.4%)	51 (94.4%)	1
Mean operative duration (minutes)	91.08 ± 7.74	32.44 ± 4.04	< 0.001
De novo urges urinary incontinence	10 (27.8)	10 (27.8)	1.0
Complications after 1 month	1 (2.8%)	0	1
Complications after 6 months	1 (2.8%)	2 (5.6%)	1
Complications after 12 months	1 (2.8%)	1 (2.8%)	1
ICIQ_UILF score after 1 month	8.7 ± 1.10	8.4 ± 3.78	< 0.001
ICIQ_UILF score after 6 months	1.8 ± 1.10	1.09 ± 4.44	< 0.001
ICIQ_UILF score after 12 months	1.2 ± 1.59	1.1 ± 4.77	0.001

Table 2: lower urinary tract symptom score based on ICIQ FLUTS questionnaires

Implication:
 Our 3-yr data indicate that compare to the classic rectus fascial – PVS method the PVDF sling tape has initial positive finding for the efficacy. PVDF tape was associated with low rates of foreign body reaction in this population of patients and in comparison, to the autologous PVS had the same success rate.
 PVDF tapes are biocompatible material for mid urethral sling, but further studies of long-term follow-up should be performed to confirm these preliminary data