Comparison of the efficacy and safety of polyvinylidene fluoride and polypropylene transobturator tapes: mid-term results from a cohort study.

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HYPOTHESIS

Although the complication rate of the TOT procedure is low it could be further decreased by improving the material used.

Rationale for PVDF use:

- Lower elongation and deformation than PP.
- Excellent biocompatibility.
- Less foreign body reaction.

AIMS

Describe and compare the effectiveness and complication rates of PVDF and PP transobturator suburethral tapes in the mid to long-term.

MATERIAL & METHODS

- Prospective cohort study.
- Pure SUI or stress-predominant mixed UI.
- Jan'2010 – May'2013
- 23 women operated with PVDF sling.
- PP controls in 1:4 ratio (n=92).
- Outcomes: Cure – Improvement – Failure (mixed objective and subjective criterion)
- Failure incidence was analyzed by the Kaplan-Meier survival functions and by a multivariate Cox regression model

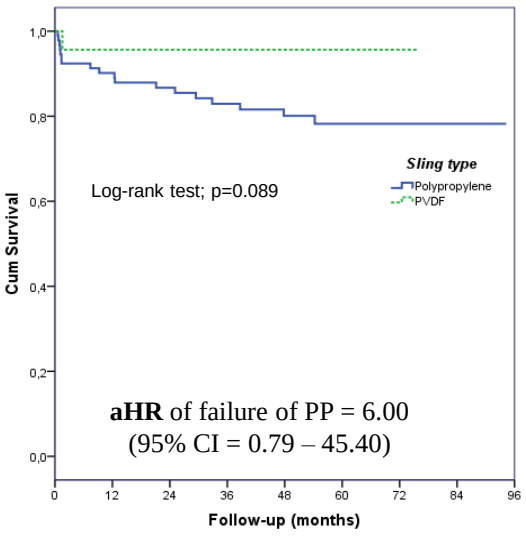
Cure-Improvement rates.

	1y	3y	5y
PP	90.2%	82.9%	78.2%
PVDF	95.7%	95.7%	95.7%

Follow-up (median)

→ PP: 51.5 months

→ PVDF: 55.6 months



Complications.

	PP	PVDF	*P*
Early postoperative	22 (23.9%)	3 (13%)	0.26
Cystitis	2	0	
Temporary elevated PVRV	22	3	
Voiding difficulty requiring ISC	4	0	
Late postoperative	11 (11.5%)	1 (4.3%)	0.29
Repeated cystitis	7	1	
Urinary obstruction	4	0	
Persistent groin pain	1	0	
Tape erosion	0	0	
De novo urgency	16 (17.4%)	1 (4.3%)	0.12
Sling division	8 (8.7%)	0 (0%)	0.14

RESULTS

Initial characteristics.

	Polypropylene	PVDF	*p*
Age*	63.8	65.8	0.394
BMI*	29.7	30.1	0.507
Previous surgery	23 (25.3%)	4 (17.4%)	0.427
Associated POP	63 (68.5%)	13 (56.5%)	0.279
Previous UUI	32 (34.8%)	10 (43.5%)	0.439
OAB	5 (15.6%)	4 (40%)	
Urethral HM	72 (79.1%)	15 (65.2%)	0.267
MUCP*	49.0	45.0	**0.018**
Associated surgery	60 (65.9%)	12 (52.2%)	0.222

* Data expressed in median.

CONCLUSIONS

- PVDF has shown similar effectiveness and safety than PP.
- Higher number of obstructive events were observed in the PP group.
- There is a potential field of improvement with the TOT procedure by finding the best material for the slings.
- PVDF seems a good alternative to PP.
- Potential benefits of PDVF over PP in suburethral slings should be further evaluated.

Disclosures: No author has any potential conflict of interest.