

700

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## **SHORT TERM FOLLOW-UP AFTER TVT AND IVS OPERATIONS: DO WE NEED 3 AND 12 MONTHS EVALUATION?**

### **Hypothesis / aims of study**

Tension-free vaginal sling technique has become an established treatment of stress urinary incontinence. Both short and long term postoperative follow-up is necessary but is time-consuming and expensive. The results obtained after 1 year seem to be stable over time. The optimal interval between short term visits has not been established. The aim of the present study was to evaluate the need for 3 and 12 months visits

### **Study design, materials and methods**

The same urogynecologist prospectively enrolled 193 consecutive women with urodynamically confirmed genuine stress incontinence. All patients underwent standardized preoperative evaluation: post void residual, a cough stress test with a bladder volume of 300 ml, measurement of urine flow and a 24-hour pad test and 24-hour bladder diary. The postoperative evaluation was done at 3 and 12 month and included post void residual, a cough stress test and urine flow. Objective cure was regarded if stress test was  $\leq 1g$  and subjective cure if the reported incontinence episodes were reduced  $\geq 90\%$  or improved if reduction was  $\geq 75\%$ . Ninety three underwent the TVT procedure (tape monofilament), hereafter the technique was changed to IVS (tape multifilament) and 100 underwent the IVS procedure. The Prolene tape was placed under local anesthesia, and adjusted while patient coughed at a bladder volume of 300 ml.

There were no significant differences between the groups concerning median age 60 (range=37-84), BMI 27 (18-41) and parity 2 (0-9). In both groups 12% has undergone previous continence surgery (Burch colposuspension).

The only significant difference was the stress test, 59 g in the TVT group and 48 g in the IVS group ( $p = 0.021$ ).

### **Results**

The postoperative outcomes are listed in Table 1.

No differences were found between TVT and IVS group with respect to subjective and objective cure and the values were stable over time.

The following parameters changed significantly compared to preoperatively values:

Maximum flow rate decreased ( $p = 0.0001$ ) in both groups, and for the TVT group the decrease continued over time ( $p = 0.0021$ ).

Postoperative there was a significant increase in post void residual compared to preoperative values ( $p = 0.001$ ). No significant change took place between 3 and 12 month and no difference was found between the groups. At 3 month there were 14 women with a post void residual  $\geq 100$  ml and at 12 month the number were 12. Only 2 women performed intermittent self-catheterisation at 3 month visit and another 2 at 12 month due to chronic retention.

Table 1. Post-operative outcomes at 3 and 12 month in 93 women underwent TVT and 100 women underwent IVS operation.

	TVT			IVS		
	Preop.	3 month	12 month	Preop	3 month	12 month
Objective cure:	-	100%	96%	-	91% *	93%
Subjective satisfaction:	-	90%	96%	-	94%	100%
• Cured:	-	82%	78%	-	81%	81%
• improved:	-	8%	18%	-	13%	19%
Res. Urine ( $\leq 10$ ml):	73%	57% +	49% +	81%	71%	62% +
Res. Urine ( $\geq 100$ ml):	3%	9%	11%	2%	7%	5%
Max flow rate (ml/s):	26	15**	13**^	26	17**	15**
Average flow rate (ml/s):	14	7 ^^	7 ^^	14	8 ^^	8 ^^

\* IVS objective cure is significant lower compared to TVT at 3 month ( $p = 0.003$ ).

+ Number of patients with no urine left in bladder postoperative is significant greater in IVS group at 3 month compared to TVT group ( $p = 0.04$ ). In the TVT group the post void residual is significant increased at 3 and 12 month compared to preoperative value. In the IVS group it is increased at 12 month ( $p < 0.05$ ).

\*\* Max flow rate is lower compared with preoperative value at 3 and 12 month in both groups ( $p = 0.0001$ ).

^ Significant decrease in max flow rate from 3 to 12 month in the TVT group ( $p = 0.021$ ).

^^ Average flow rate is lower compared to preoperative value ( $p = 0.0001$ ).

### **Interpretation of results**

The outcomes obtained after 3 month was stable for all parameters except 2:

1. The maximum flow rate in the TVT group continued to decrease over time from 15 ml/s to 13 ml/s at 12 month ( $p = 0.021$ ).
2. Change over time (from 3 to 12 month) in post void residual  $\geq 100$  ml: 9 patients have normalized the volume at 12 month and 5 new patients had increased the volume from normal to volume  $\geq 100$  ml. Due to this the rate of intermittent self-catheterisation was 2 patients at 3 month and 4 patients at 12 month.

### **Concluding message**

Even the sling technique intent to be non-obstructive by placing the sling tension-free obstruction is not omitted and the effect is voiding dysfunction expressed in reduced maximum flow rate and increased post void residual. Therefore it is important and necessary to schedules short and long term postoperative follow-up. 3 and 12 month seem reasonable interval for short term postoperative follow-up after surgery for stress urinary incontinence in women.