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SHORT TERM CLINICAL OUTCOME OF MID-URETHRAL TAPES.

Hypothesis / aims of study

Retropubic and transobturator tapes are well established and effective procedures in the treatment of female Urodynamic Stress Incontinence (USI)[1]. Single incision Mini-sling tape are newer developments over the last few years [2].

The aim of this study is to look at the complications and effectiveness of mid urethral tapes in our unit: Inside- out tape transobturator tapes (TVTO - Gynecare) , Retropubic tape (TVT - Gynecare) & Single incision Mini-sling(BARD - Ajusts) .

Study design, materials and methods

Prospective cohort study of tapes procedures performed during the period from January 2010 to September 2011. Patients having these procedures in our unit are entered into a database run by the 'Clinical Effectiveness Unit' within the trust. Also recorded are clinical details including findings/ operative details / complications etc..

Patients are then reviewed at 3-months were they all receive the same standardised assessment. These results are also logged onto the database. We looked at the data of the of 163 cases entered during these 18-months.

Results

There were 117 TVTO , 23 TVT and 23 Ajust tapes respectively.Patient demographics are shown in table 1. 17 (14.5%) TVTO tapes and 15 (65%) TVT tapes were repeat procedures for stress incontinence. Tapes were combined with other vaginal surgery in 31% TVTO, 13% of TVT & 13% of Ajust cases.

There was no case of significant bleeding (+ 500ml). There was only 1 bladder injury with TVT case giving our urinary tract injury incidence at 4.3% for TVT and 1/163 (<1%) overall, although not all TVTO's had intra-operative cystoscopies.

Table-1 Baseline characteristics

		TVTO n=117	**TVT** n=23	**Ajust** n=23
AGE	Mean(years)	52	52	49
	Range	35-77	32-73	39-68
	<65 yrs	17(20%)	2(9%)	2(9%)
	>65yrs	100(80%)	21(91%)	21(91%)
BMI	<29	64(55%)	11(48%)	14(61%)
	30-34	23(19.5%)	8(34%)	1(4%)
	>35	13(11%)	2((%)	-
Type of procedure	Primary	100(85.5%)	8(35%)	23(100%)
	Repeat	17(14.5%)	15(65%)	0
	Combined with other vaginal surgery	36(31%)	3(13%)	3(13%)

81%TVTO, 87%TVT & 83% Ajust tapes were available for follow up. Overall 92.5% TVTO. 95% TVT and 94.5% of Ajusts were subjectively cured (dry & improved enough)and discharged. The breakdown of the dry and improvement rates are shown in table 2. The success rate of TVT is similar to TVTO despite 65% of TVTs being repeat procedures.

Table-2 Success rate & post-operative problems

		TVTO	**TVT**	**Ajust**
USI	Follow up	94/117 (81%)	20/23 (87%)	19/23 (83%)
	Cured	87(92.5%)	19(95%)	18(94.5%)
	Dry	70 (74.5%)	12 (60%)	16 (84%)
	Improved	17 (18%)	7 (35%)	2 (10.5%)
Delayed complications	Mesh erosion	3(3.2%)	0	0
	Pelvic pain	6(6.5%)	0	1(5.5%)
	Groin pain	4(4.2%)	0	1(5.5%)

Mesh erosion rates were 3.2% for TVTO, 0% with TVT & Ajust. Groin / Pelvic pain in TVTO group were 4.2% / 6.5%, 0% with TVT and 5.5% each in Ajust.

The incidence of urinary retention requiring Intermittent Self Catheterisation (ISC) past day 10 were, 7% with TVTO, 17% TVT & 8.5% of Ajust tapes.

Table-3 Outcome of repeat procedures

		TVTO-17	TVT-15	Ajust-0
	Cured	16(94%)	14 (93%)	
USI	Dry	12 (70.5%)	9 (60%)	
	Improved	4 (23.5%)	5(33%)	
	Mesh erosion	1 (6%)	0	

In cases done as secondary procedures, symptoms of USI cured(dry & improved enough) in 94% of TVTO and 93%TVT. The breakdown of the dry and improvement rates are shown in table 3. The success rate of TVTO tapes similar to TVT. .

Interpretation of results

The overall success rates and patient satisfaction is similar between the 3 different mid-urethral tapes. The completely dry rates with TVTO and Ajust tapes were better than TVT (although the overall success rate and patient satisfaction are comparable). This could be because 65% of TVT tapes were done as repeat procedures, where poorer results are sometimes seen. This may also explain the higher ISC rates in our TVTs.

The incidence of voiding difficulties, mesh erosion, groin and pelvic pain in TVTO group were similar to other reported studies. The success rate for re-do tapes was similar to that of primary tapes.

Concluding message

The overall success rate (cure+improved) for TVT, TVT-O and Ajust were similar in our cohort 92.5%, 95% and 94.5% respectively. Mesh erosion, groin pain and pevic pain rates with TVTO tapes were 3.2%,4.2% and 6.5% similar to reported in literature. Retropubic tapes offered similar success rates as secondary procedures to those tapes being done as a primary procedure, although with higher incidence of post-operative ISC and a bladder injury rate of (4.3%).

Even though our incidence of bladder injury was low, not all of TVTO's had intra-operative cystoscopy performed (TVT's and Ajust did) . This is now our unit policy and we recommend routine cystoscopy with every tape procedure.

References

1. BJU Int. 2010;106(1):68.
2. BJU Int. 2012;109:880-886.

Ethical approval: None needed
Funding: None

References

1. BJU Int. 2010;106(1):68.
2. BJU Int. 2012;109:880-886.

Disclosures

Funding: None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** It was not a trial. This was a routine intervention performed in our unit which is regularly supervised by clinical effectiveness group **Helsinki:** Yes **Informed Consent:** Yes