incontinence. One woman in the TVT group was substantially improved. One of the TVT and 3 of the colposuspension group had persistent urge incontinence post-operatively, however there were no cases of de-novo urge incontinence.

There were no differences in pre-operative bladder neck angles or movement on valsalva between groups.

Post-operative bladder neck angles and movement were significantly less in the colposuspension than the TVT group.

When comparing pre-operative to post-operative variables in the TVT group there was a significant post-operative reduction in bladder neck angle at rest and valsalva, however the reduction in angle change (rotational movement) and bladder neck excursion (linear movement) on valsalva was not significant. For the colposuspension group there was a significant post-operative reduction in all parameters.

PRE-OP	ANGLE REST (±SD)	ANGLE VALSALVA (±SD)	ANGLE CHANGE ON VALSALVA (±SD)	BLADDER NECK EXCURSION mm(±SD)
TVT	124 (±13.7)	161 (±20.7)	37 (±29.7)	16.5 (± 7.4)
COLPO	111 (±13.8)	162 (±24.1)	51 (±18.5)	17.6 (±6.9)
POST-OP				
TVT	108 (±12.5) *	140 (±11.1) *	32 (±13.8)	14.5 (±4.9)
COLPO	80 (±9.4) *	86 (±19.6) *	6 (±12.2) *	7.2 (±6.5) *
P VALUE	0.001	0.001	0.004	0.030

*** Significant difference compared to pre-op; P <0.03**

The resting bladder neck position was elevated more by the colposuspension than the TVT, however the difference was not significant; ie: TVT elevation of 9.2mm (SD 5.7) versus colposuspension elevation of 16.2mm (SD 9.8); P=0.153.

Conclusions.

The data shows the TVT significantly elevates the bladder neck. The elevation is less than that of colposuspension but the difference is not statistically significant. TVT also significantly decreases the bladder neck angle in relation to the symphysis at rest and maximum valsalva, but this is significantly less than that for colposuspension. The TVT does not significantly decrease rotational or linear movement on valsalva whereas colposuspension does.

Our results show the TVT significantly affects bladder neck elevation but not movement. The preliminary data suggests the mechanism of continence may be similar to the colposuspension ie: bladder neck elevation. More data, (e.g.: urethral pressure profiles) are required to support this and elucidate the mechanism by which TVT produces continence.

References.

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DOES THE AMOUNT AND TYPE OF FLUID INTAKE EFFECT URINARY SYMPTOMS IN WOMEN?

Aims of the study:

Urinary symptoms including incontinence are recognised as being both common and troublesome among women (1). Conservative measures involving fluid manipulation are often tried by patients in an attempt to alleviate their symptoms (2). Although these practices are common, and indeed often advised by health professionals, little research has been performed to determine their efficacy. A previous descriptive study of fluid intake found only modest correlation between fluid intake and incontinence (3). We are not aware of any prospective studies that measure the effect of fluid manipulation on urinary symptoms. This study was instigated to assess the influence of fluid intake on urinary symptoms, and to establish the role of fluid manipulation in their management.

Methods:

An observational crossover study was performed among women with either urodynamically proven genuine stress incontinence (GSI) or detrusor instability (DI) to determine the effect of caffeine restriction, and of increasing and decreasing fluid intake. The study lasted four weeks and consisted of a baseline week, a week of caffeine restriction, a week of increasing and a week of decreasing decaffeinated fluids. Women were randomised in the order in which they increased and decreased fluids. Urinary diaries including information concerning episodes of urgency and leakage were kept for the study period. A 24 hour pad test was completed at the end of each week as well as a short symptom questionnaire. General linear models were fitted to the data after log transformation and F-statistics were used to test for differences between treatments. Data from the two diagnostic groups were analysed separately.

Results:

39 women with GSI and 25 women with detrusor instability completed the study. The mean age of the women was 54 years (range 31-76 years). Mean fluid intake was 1607 mls for the first week, 1619 for the second week, 2669 for the week of increasing fluids and 879 mls for the week of decreasing fluids. Table 1 illustrates the differences in the median 24 hour pad weights and wetting episodes for the study period for women with GSI and DI with inter-quartile ranges displayed in brackets.

Table 1:

	baseline week	caffeine free (CF) week	CF+increasing fluids	CF+decreasing fluids
24 hour pad wt increase (gms) (GSI)	7.6 (15)	7.1 (9.4)	7.9 (16.2)	6.9 (11.8)
24 hour pad wt increase (gms) (DI)	6.7 (10.8)	5.7 (11.4)	10.9 (21.7)	5.0 (18.6)
no. daily wetting episodes (GSI)	1.6 (2.3)	0.8 (1.9)	0.7 (2.8)	0.5 (2.0)
no. daily wetting episodes (DI)	0.7 (1.6)	0.5 (1.4)	0.9 (2.8)	0.5 (0.7)

The median daily number of urgent episodes and voiding frequencies for the women with DI are shown in Table 2.

Table 2:

DI group	baseline week	caffeine free (CF) week	CF+increasing fluids	CF+decreasing fluids
number of urgent episodes	5.1 (4.2)	5.4 (4.8)	7.2 (4.3)	4.0 (3.3)
voiding frequency	8.2 (3.5)	8.1 (3.8)	10.1 (5.3)	7.6 (2.6)

There was no significant difference in 24 hour pad weight loss in women with GSI or DI in any of the four weeks, but there were more wetting episodes in the baseline week for women with GSI than with decreased or decaffeinated fluids. Women with DI were clearly shown to have increased voiding frequency ($p=0.03$) and urgent episodes ($p=0.01$) in the week of increased fluids. Decreasing fluids also reduced the number of episodes of wetting ($p=0.03$) and voiding frequency ($p<0.0001$) in this group of women.

There was no difference in the quality of life impact of urinary symptoms for either group with the mean impact of their urinary symptoms remaining as "a little" on their daily life for the period of the study.

Conclusions:

Altering fluid intake did not effect leakage in women with GSI, which illustrates that factors other than fluid intake play a more important role in causing leakage in this group. Increasing fluid intake adversely effected symptoms in women with DI, while decreasing fluids reduced wetting episodes and frequency. This study confirms the clinical impression that women with DI who have a large fluid intake would benefit from reducing their intake. Whilst women with DI did find that decreasing fluids reduced wetting episodes and frequency, side effects such as constipation and thirst were troublesome.

References:

1 Neurourol Urodyn 1997 16: 431-2

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