

## A SYSTEMATIC REVIEW OF CATHETERISATION FOLLOWING PELVIC ORGAN PROLAPSE REPAIR SURGERY

### Hypothesis / aims of study

Our aim was to look at urinary tract infections and retention following vaginal repair/ vaginal hysterectomy by performing a systematic review and meta-analysis.

Most Gynaecologists leave an indwelling catheter following the pelvic organ prolapse repair. A questionnaire survey of bladder drainage practices showed the initial catheterisation varied from 1-7 days postoperatively [1]. We have limited evidence available regarding the optimal duration of catheterisation.

### Study design, materials and methods

We searched randomised controlled studies to compare the duration of indwelling catheters following vaginal prolapse surgery with or without vaginal hysterectomy.

We conducted a literature search of English articles in MEDLINE, Embase, Pub med, CINAHL and Google scholar from December 2002 till December 2012. We also hand searched references, Conference proceedings and abstracts of IUGA/ICS for the last 10 years.

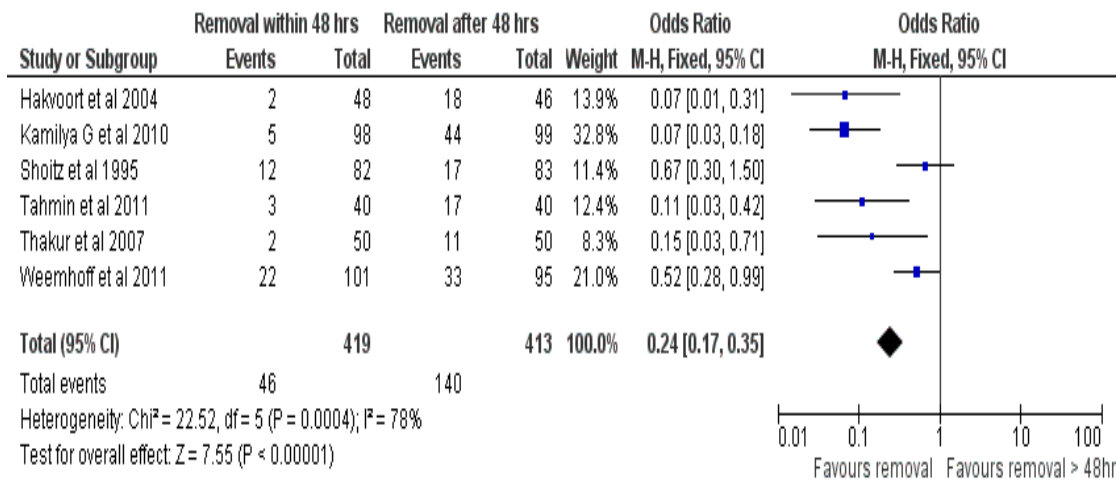
We looked into the rates of postoperative retention and urinary tract infection.

### Results

Table: 1 Meta analysis of Urinary Retention

Study or Subgroup	Removal within 48 hrs		Removal after 48 hrs		Weight	Odds Ratio M-H, Fixed, 95% CI	Odds Ratio M-H, Fixed, 95% CI
	Events	Total	Events	Total			
Hakvoort et al 2004	19	48	4	46	11.0%	6.88 [2.12, 22.33]	
Huanj C et al 2011	0	28	1	51	4.7%	0.59 [0.02, 14.98]	
Kamilya G et al 2010	21	98	8	99	27.8%	3.10 [1.30, 7.40]	
Shoitz et al 1995	7	82	3	83	12.1%	2.49 [0.62, 9.98]	
Tahmin et al 2011	6	40	1	40	3.8%	6.88 [0.79, 60.06]	
anapur et al 2007	3	50	1	50	4.2%	3.13 [0.31, 31.14]	
Weemhoff et al 2011	35	123	11	112	36.6%	3.65 [1.75, 7.62]	
<b>Total (95% CI)</b>		<b>469</b>		<b>481</b>	<b>100.0%</b>	<b>3.67 [2.35, 5.72]</b>	
Total events	91		29				
Heterogeneity: Chi <sup>2</sup> = 3.11, df = 6 (P = 0.80); I <sup>2</sup> = 0%							
Test for overall effect: Z = 5.74 (P < 0.00001)							

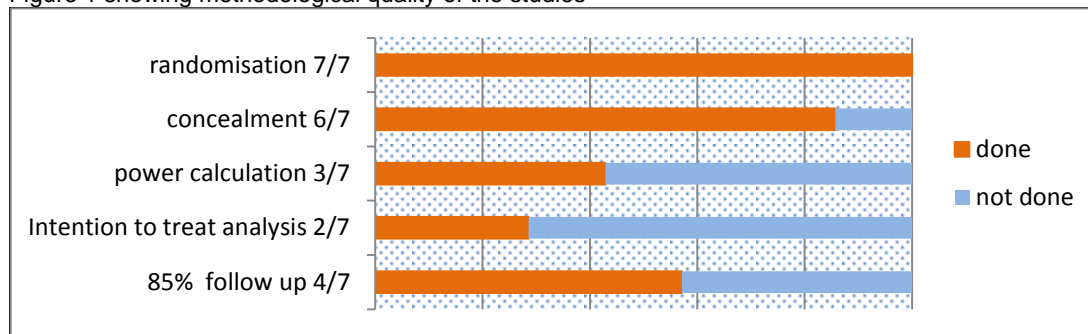
Table: 2 Meta analysis of Urinary tract infection



### Interpretation of results

The results showed a lower risk of urinary infection in patients having the catheter in for less than 48hrs OR 0.24 (95% CI 0.17 – 0.35). However, there was a higher risk of patients going into urinary retention following removal of the catheter in this group of patients OR 3.67 (95% 2.35 – 5.72). The quality of the studies is shown below.

Figure 1 showing methodological quality of the studies



### Concluding message

The short-term catheterisation has shown the benefit of reducing urinary tract infections, with a higher risk of retention. This can be helpful in determining the optimal duration for postoperative catheterisation with the possible need for prophylactic antibiotics if prolonged catheterisation is needed.

### References

1. Hilton P. Bladder drainage: a survey of practices among gynaecologists in the British Isles. BJOG 1988;95:1178-1189

### Disclosures

**Funding:** The authors have no disclosure of interest **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** This study was a systematic review of already published Randomised trials **Helsinki:** Yes **Informed Consent:** No