

URINARY TRACT INFECTION AFTER MID-URETHRAL SLINGS: PREVALENCE AND RISK FACTORS

Hypothesis / aims of study

To detect prevalence of urinary tract infection (UTI) in women with stress urinary incontinence before, immediately after and on long term follow-up after mid-urethral slings based on culture-proven diagnosis.

Study design, materials and methods

Clean catch mid-stream urine samples were collected and sent for agar culture in 150 patients before and immediately after mid-urethral slings. At follow up visits, 62 patients underwent same procedures. Degree of agreement between cultures proven UTI and clinically suspected cases were assessed. In addition, risk factors for UTI were analyzed. Post hoc test was utilized to compute achieved power. When sample size was 141 and 9 patients with α err prob 0.05 and effect size d is 0.8 we get power of 0.75 as regard to t test.

Results

Pre operative culture was positive in 9 (6%) patients, 7 of them were asymptomatic. UTI was primarily diagnosed in 39 (26%) patients based on suggestive symptoms. No bacterial growth was detected in any samples that were taken at first postoperative day. There were 6 out of 62 (9.7%) patients had positive urine cultures at follow-up visits, all of them were symptomatic. Eleven (18 %) patients were diagnosed as UTI cases, based on clinical suspicion. All positive cultures revealed mono-organism included Klebsiella pneumonia, E coli and Candida albicans. Risk factors for development of UTI were summarized (table-1).

Interpretation of results

There is no specific risk factor that can increase incidence of UTI among patients with SUI. Compared with "clinically suspected diagnosis", lower prevalence of UTI was detected when diagnosis was based on urine culture .

Concluding message

Immediate preoperative chemoprophylaxis can eliminate the possibility of nosocomial infection after tissue handling and catheterization. In contrast to UTI before surgery, asymptomatic bacteriuria is unlikely to happen after mid-urethral sling.

Table 1: Likelihood ratio for development of infection in SUI

Odds ratio	95 %Confidence interval
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Age more than 50 years	0.93	0.22 - 3.9
Menopause	1.3	0.3 - 5.4
Parity >3	0.6	0.13 - 3.5
BMI> 30	0.7	0.15 - 2.8
POP	0.3	0.07 - 1.3
Contenance surgery	1.05	0.12 - 8.9
Hysterectomy	1.5	0.16 - 13
DM	ND	
Abnormal UD findings	0.7	0.07 - 5.3

<i>Specify source of funding or grant</i>	Non
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	Yes
<i>Specify Name of Ethics Committee</i>	Local Ehics Committee, Mansoura University, Urology and Nephrology Center
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes