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CAN PATIENTS BENEFIT FROM PROPHYLACTIC ANTIBIOTICS BEFORE URODYNAMICS? A SYSTEMATIC REVIEW

Hypothesis / aims of study

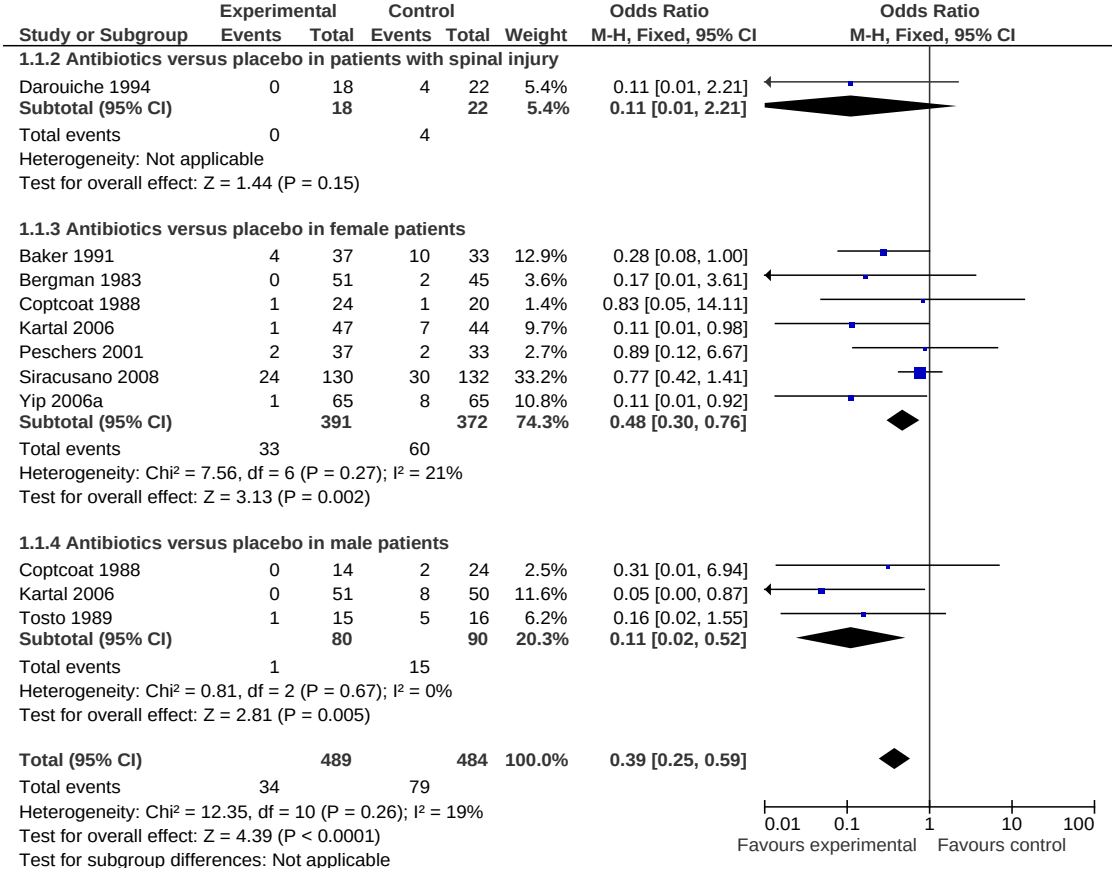
Urodynamic studies are used to identify dysfunctions of the lower urinary tract. However it is estimated that one episode of catheterization has a 2% incidence of urinary tract infection (UTI) [1]. The aim of this Cochrane systematic review was to look at the effectiveness and complications of using prophylactic antibiotics at Urodynamics in order to prevent UTI.

Study design, materials and methods

All reports, which describe (or might describe) randomised controlled trials (RCTs) of prophylactic antibiotics in patients having urodynamics studies were obtained with no language restrictions. The population included adult males, females or children undergoing urodynamic studies. We searched the Cochrane Incontinence Group Specialised Trials Register which contains trials identified from the Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, CINAHL, EMBASE, Pubmed, TRIP, LILACS and the UK NHS Evidence Health Information Resources up to December 2009. We also hand searched the references of journals and conference proceedings. The data was analyzed using the Review manager 5 software. The outcome measured was urinary tract infections after Urodynamics.

Results

There were nine RCTs with 1086 patients. Meta-analysis showed a lower risk of UTIs in patients receiving prophylactic antibiotics.



All but one study defined a urinary tract infection as a count of > 10^5 /ml of urine. The antibiotics varied in type, dose and duration and the studies were methodologically poor. The NNT (Number Needed to Treat) with antibiotics to prevent one UTI is 11 (95% CI 7.5 to 18.5). One patient developed a rash while another developed an anaphylactic reaction.

Interpretation of results

This systematic review represents an update of a previous systematic review [2] .The study showed the number needed to treat to prevent one infection was 11; however the clinical significance of this is unknown. One has to weigh the benefits of antibiotics with the cost effectiveness and the risk of adverse events with antibiotics.

Concluding message

Significant bacteriuria can be reduced by giving antibiotics prophylactically in patients having Urodynamics.

References

1. Br J Urol 1978;50:106-8
2. Neurology and Urodynamics 2008;27:167-173

Specify source of funding or grant	**None**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**This is a systematic review of previous studies**
Was the Declaration of Helsinki followed?	**No**
This study did not follow the Declaration of Helsinki in the sense that	**It is a systematic review of other studies done.**
Was informed consent obtained from the patients?	**No**