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ANTIBIOTIC PROPHYLAXIS AND URODYNAMIC STUDIES

Hypothesis / aims of study

The use of antibiotic prophylaxis before urodynamic studies (US) is not recommended routinely. We investigated the factors that would enable us to predict bacteriuria that is likely to develop after US, and that make us consider the need for prophylaxis.

Study design, materials and methods

One hundred and four patients who would undergo US with a suspicion of lower urinary tract dysfunction were enrolled in the present study and followed up prospectively. The relationship between bacteriuria and several parameters, such as gender, age, body mass index, glomerular filtration rates, systemic diseases, urinary flow rates, residual urine volume, the type of process performed, and maximum cystometric capacity values, was investigated

Results

Following US, a bacteria level of 10^5 was detected in 7 of 104 patients (6.7%). According to the results of the Pearson's chi square test, there was a statistically significant relationship only between the presence of diabetes and bacteriuria ($P = 0.013$). Logistic regression analysis revealed statistically significant results indicating a direct proportion between the incidence of bacteriuria and increased post-void residual volume ($P < 0.0001$), with an inverse proportion between the frequency of bacteriuria and decreased bladder capacity ($P = 0.021$).

Interpretation of results

Depending on the data obtained in this study, we recommend the administration of prophylaxis before US in patients with diabetes mellitus. However, we think that in order to reduce incidences of bacteriuria and UTI it would be beneficial to administer prophylaxis in patients whose PVRV value was found to be greater than 100 mL and the total of PVRV and voiding urine volume (the bladder capacity) less than 280 mL after performing uroflowmetry and residual urinary volume measurements, which are requisite before US.

Concluding message

Due to low rates of bacteriuria after US, the use of prophylactic antibiotics is not a routine procedure except in selected patients.

TITLE:

Antibiotic prophylaxis and urodynamic studies

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Disclosures

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