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Citation	The 17th Annual Scientific Meeting of the Hong Kong Urological Association, Hong Kong, 6 November 2011. In Program Book, 2011, p. 36
Issued Date	2011
URL	http://hdl.handle.net/10722/153140
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Prevalence of Antibiotic-Resistant Intestinal Flora in Patients Undergoing Transrectal Ultrasonography-Guided Prostate Biopsy (TRUS-Bx) and Its Implication for Clinical Practice: Preliminary Results

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Objective :

An important factor determining the choice of antibiotic for TRUS-Bx prophylaxis and treatment of post-biopsy infection is the prevalence of quinolone-resistant and ESBL-producing organisms in the rectum of patients undergoing this procedure. We aim to determine these prevalence values in patients undergoing TRUS-Bx and to study their correlation with the microbiological data of patients with post-biopsy sepsis.

Patients & Methods:

From August 2011, rectal swabs were taken from patients undergoing TRUS-Bx in CMC and PMH before being given ciprofloxacin prophylaxis. Swabs were processed in selective media for ciprofloxacin-resistant and ESBL-producing organisms. Patients were prospectively studied for post-biopsy complications.

Results:

Of the 40 patients who had rectal swabs taken, 16(40%) and 17(42.5%) harbored ciprofloxacin-resistant and ESBL-producing coliforms respectively whilst ICBL-producing coliform was found in one patient. A total of 32 bacterial colonies had their antibiogram studied. Among the broad-spectrum antibiotics, amikacin, Tienam[®], and meropenem were 100% sensitive whilst sensitivity to Sulperazone[®] and Tazocin[®] both reached 96.9%. Resistance towards Augmentin[®], ciprofloxacin, gentamicin, ceftriaxone, cefuroxime and Timentin[®] were 9.4%, 56.2%, 43.8%, 62.5%, 65.6%, and 3.1% respectively.

Conclusions:

A relatively high prevalence of ciprofloxacin-resistant and ESBL-producing coliforms was found in our TRUS-Bx patients, as compared to overseas data (10-22%). To our knowledge, this is the first study on antibiotic resistance in rectal flora of Asian patients undergoing TRUS-Bx.