

International Congress on

Nosocomial and Healthcare Associated Infections
&2nd Global Medical Microbiology Summit & Expo

October 02-04, 2017 Las Vegas, USA

Genotyping of *E. coli* associated with community acquired vs. hospital acquired urinary tract infection

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Uropathogenic *E. coli* (UPEC) are responsible for ~90% of community acquired and ~65% of hospital acquired urinary tract infections (UTIs). We compared genotypic profiles of *E. coli* strains associated with community acquired cystitis (CA; n=40) and hospital acquired UTI (HA; n=20) in the present study by analyzing them for phylogroups & 15 putative virulence genes (VGs). Virulence score was calculated for each isolate as number of virulence genes detected. The bacterial culture and identification were done using standard conventional methods. 63.2% *E. coli* isolates associated with HA *E. coli* isolates belongs to commensal phylogroup A & B1 in comparison to CA *E. coli* isolates where 57.5% were from pathotypic phylogroups i.e. B2 & D. Average virulence score was higher for CA *E. coli* isolates (4.95) than HA *E. coli* isolates (4.09). VGs like *fimH*, *papA*, *kpsMII*, *fyuA*, *traT* and *afa/draBC* were more frequently present in CA *E. coli* isolates. It may be that other factors like general condition of patients and ease of bacterial entry into the body and infection prevention practices play more important role in HA UTI than virulence potential of pathogen itself.

Biography

Jyotsna Agarwal has joined at King George's Medical University, Lucknow as faculty in April 2002, and is currently working as Professor of Microbiology, In-Charge Bacteriology Laboratory. She received her MBBS degree from CMC, Vellore and MD in Microbiology from BHU, Varanasi. She is Nodal Officer In-Charge for regional centre of WHO sponsored diphtheria surveillance project and regional RTI/STI Centre for state of Uttarpradesh. She is working in the field of pathogenesis of urinary tract infections in women from last eight years. Her other research interests include antimicrobial resistance, molecular diagnostics; focus areas are infections of children including pneumonia, septicemia and meningitis along with sexually transmitted/reproductive tract infection. She has more than 50 publications in reputed journals.

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