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Detection of plasmid-mediated quinolone resistance and bla_{ndm-1} genes among extended-spectrum β-lactamase producing *Klebsiella pneumoniae* in Iran

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ESBL-positive *Klebsiella pneumoniae* is often resistant to non-β-lactam antibiotics especially fluoroquinolones, and rapid dissemination of these resistant strains has led to the increased utilization of carbapenems. The emergence of carbapenemases producing isolates is an outcome of increased utilization of carbapenems. Of the carbapenemases, the New Delhi metallo-β-lactamase-1 (NDM-1) was first described in a *Klebsiella pneumoniae* isolate and becoming increasingly prevalent in many countries. The aim of present study was detection of plasmid-mediated quinolone resistance and bla_{NDM-1} genes among extended-spectrum β-lactamase producing *Klebsiella pneumoniae* in Kashan, Iran. During the study period from April 2013 to April 2014, 185 K. pneumoniae isolates were tested for quinolone resistance and ESBL producing using the disk diffusion method and double disk synergy (DDST) confirmatory test. ESBL-producing strains were further evaluated for the bla_{CTX-M} genes. The PCR method was used for the detection of plasmid-mediated quinolone resistance and bla_{NDM-1} genes and the purified PCR products were sequenced. The Double Disc Synergy Test (DDST) confirmed 47% (n=87) of isolates as ESBL-producing Klebsiella strains. Majority of which (80.5%) carried bla_{CTX-M} genes and 23% were positive for bla_{NDM-1}. All of them and 89.7% were multi drug- resistant (MDR) and fluoroquinolone resistant respectively. Seventy-seven ESBL producing K. pneumoniae isolates harbored PMQR genes, which mostly consisted of *aac*(6')-*Ib-cr* (70.1%) and *qnr*B (46.0%), followed by *qnr*S (5.7%). Among the 77 PMQR-positive isolates, 27 (35.1%) and 1 (1.3%) carried 2 and 3 different PMQR genes, respectively. However, *qnr*A and *qep*A were not found in any isolate. Our results highlight high ESBL occurrence with CTX-M type and high frequency of plasmid-mediated quinolone resistance genes among ESBL producing *K. pneumoniae* isolates in our region. Also multidrug-resistant *K. pneumoniae* isolates harboring bla_{NDM-1} are emerging in Iran.

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A serological investigation of infections in the etiology of schizophrenia, Cukurova Region, Turkiye

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Schizophrenia is a chronic, severe, and disabling brain disorder that affects approximately 1% of the world's population and the underlying mechanisms are not thoroughly understood. Recent studies supporting the hypothesis that infections especially Syphilis, Brucellosis, Chlamydiosis, Toxoplasmosis, Herpes Simplex Virus (HSV), Cytomegalovirus (CMV) and Bornavirus can cause psychiatric syndromes when they infect adults is well known and plays a role in the etiology of schizophrenia is increasing. This study aimed to investigate relationships between various infections and schizophrenia in Cukurova region of Turkey.

A total of 172 patients with schizophrenia and 100 healthy individuals as controls attending Cukurova University Hospital and Adana Mental and Neurological Diseases Hospital who fulfilled the (DSM-IV) criteria were re¬cruited in this study. All collected serums were analysed in terms of IgG levels of Chlamydia spp, *T.pallidum T.gondii*, HSV1, HSV2, CMV, and Bornavirus with ELISA. The results of patients and control groups samples for CMV, HSV1, HSV2, *T gondii, T,pallidum, C.trachmatis, C.pneumonia* and Bornavirus by EIA were 93%, %98, 0.58%, 91%, 0.85%, 3%, 80%, 4% and 92%, 96%, 058%, 68%, 0%,8%, 63%, 0% respectively. Our findings showed that there were significant differences between seropositivity of *T. gondii*, *C. pneumoniae*, Bornavirus IgG antibodies among patients with schizophrenia compared to controls, suggesting the important role of infections in schizophrenia.

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