

# DETECTION OF OQXAB EFFLUX PUMPS GENE IN ESCHERICHIA COLI AND KLEBSIELLA PNEUMONIA ISOLATED FROM PREGNANT WOMEN SUFFERED FROM URINARY TRACT INFECTIONS AND DIABETES MELLITUS IN BASRAH

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**Abstract:** Considerably, pregnant women with diabetes mellitus are highly susceptible to urinary tract infections. The aim of the study is investigate the incidence of OqxAB efflux pumps gene among Escherichia coli and Klebsiella pneumonia isolates from urine of pregnant women suffered from urinary tract infections and Diabetes mellitus. E.coli and K.pneumonia were identified using conventional methods and confirmed by specific 16S rDNA primers. Antibiotic susceptibility test of E. coli and K. pneumonia isolates against several antibiotics were examined using Vitek®-2 compact system .The production of efflux pump by E. coli and K. pneumonia isolates were investigated phenotypically using ethidium bromide-agar cartwheel method (EtBr CW). Moreover, OqxAB Efflux Pumps genes were tested. The results showed that among 100 urine samples, 40 urine samples showed positive bacterial growth where 21(51%) E coli isolates, 8(20%) K. pneumonia isolates. In terms of antibiotic sensitivity, all E.coli and K.pneumonia isolates were resistant to ampicillin, piperacillin and ticarcillin, respectively. The prevalence of OqxAB efflux pump genes frequency ranges from 72% in E. coli and 50% in K. pneumonia.

**Keywords:** OqxAB Efflux pumps, E. coli, UTI, UTI, Diabetes Mellitus, Antibiotic sensitivity



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## INTRODUCION

Urinary Tract Infections (UTIs) is highly considered as one of the leading infections that associated with pregnancy globally. These types of infection generally are hard to overcome because of the therapeutic challenges that consequently might affect mother and new born together (Onyango et al., 2018). Interestingly, pregnant women with diabetes are more susceptible to UTIs due to decrease of cytokines in urine and decreasing of neutrophil response and decrease of leukocyte concentration (Al-Bidhani, 2018). Moreover, It was found that the invasion of microbes to the epithelial cells lining the urinary tract with diabetes is easier in comparision to