

Frequency of Sulfonamide Resistance Genes (sul) in *Escherichia coli* Isolated from Urinary Tract Infection in Ilam and Tehran (Milad) Hospitals

Hadis Arabi*¹, Iraj Pakzad²; Ayat Allah Nasrolahi¹; Neda Mansouri³

1-Department of Microbiology, Tonekabon Branch, Islamic Azad University, Tonekabon, Iran

2-Department of Microbiology, Faculty of Medicine and Clinical Microbiology Research Center, Ilam University of Medical Sciences, Ilam, Iran

3-Department of Microbiology Karaj Branch, Islamic Azad University, Karaj, Iran

hadissarabi@rocketmail.com

Background & Objectives: Extensive use of cotrimoxazole has been associated with raising level of resistance. In the current study, we focused on assessing the prevalence of *Escherichia coli* resistance to cotrimoxazole and frequency of sul genes.

Methods: One hundred and forty- four *Escherichia coli* isolates were identified during Mar.2007 to Apr.2012 in Ilam hospitals and Milad (Tehran) hospital. PCR was performed for detection of sul1, sul2, sul3 genes.

Results: Of 144 isolates, eighty seven isolates (60.41%) were resistance to cotrimoxazole. Frequency of sul1, sul2, sul3, were 81% (71 isolates), 67%(59 isolates), 2.29% (2 isolates), respectively. 50.57%(44 isolates) had sul1, sul2 and 2.29 % (2 isolates), contained sul2, sul3 and 2.29%(2 isolates) had sul1 sul2 sul3 genes together.

Conclusion: Our study showed high frequency of cotrimoxazole resistance gense in Ilam and Tehran (Milad) Hospitals.

Keywords: Cotrimoxazole; Sul; Resistance; *Escherichia coli*; Iran