

Antibiotic Susceptibility of *Propionibacterium Acne* Isolated from the Patients Afflicted by Acne in Tonekabon City, 2013- 2014

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Abstract

Background and Objective: *Propionibacterium acne* is one of the main causes of acne. Due to the spread of drug resistance, it is not responsive to treatment. This study aimed to determine antibiotic sensitivity of strains of the *Propionibacterium acne*.

Material and Methods: seventy samples of acne lesions were collected to study the presence of *Propionibacterium acne*. Microbial Culture technique was used to detect and identify *Propionibacterium acne*. Antibiotic resistance of the isolates to the antibiotics of Doxycyclin, Azithromycin, Erythromycin, Tetracycline, Clindamycin and Trimethoprim sulfamethoxazole was studied by Antibiogram method.

Results: Of 70 samples, 14 (20%) were positive for *Propionibacterium acne*. The results of phenotypic test were confirmed using molecular method. Rate of resistance to Azithromycin and Erythromycin (50%), Clindamycin (35.71%), Trimethoprim sulfamethoxazole (28.57%), Doxycycline and Tetracycline (14.29%) was determined.

Conclusion: Outbreak of antibiotic resistance to Azithromycin, Erythromycin, and Clindamycin is high. Since the *Propionibacterium acne* is sensitive to Doxycycline and Trimethoprim Sulfamethoxazole, it is recommended using them to treat acne.

Keywords: Antibiotic susceptibility, *Propionibacterium Acne*, Ance Protein.