

4th International Webinar on **Clinical Microbiology and Immunology**

October 27, 2021

Proposal of Epidemiological Cutoff Values for Tigecycline 15 µg Disk Applicable to Acinetobacter species

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Tigecycline is an antimicrobial agent restrictively used in hospitals for refractory infections. Resistance determinants to this antimicrobial agent has been described in several Enterobacterials, yet no inhibition zone-based is available to detect Acinetobacter populations. In this study, we propose disk diffusion inhibition zone of Acinetobacter species for tigecycline.

The susceptibility to tigecycline was evaluated by disk diffusion (DD) of Acinetobacter spp. comprising *A. baumannii* (n = 46) and *A. nosocomialis* (n = 72) collections from different geographic provinces of Iran. On the other hand, minimum inhibitory concentration of isolates was done by broth micro-dilution method and resistance/susceptible definition was interpreted by Food and Drug Administration criteria. Zone diameter breakpoints were calibrated to the FDA Clinical MIC Breakpoints, that the MIC ≤ 2 as susceptible and ≥ 4 as resistant.

The correlation between MICs and inhibition zones is better for *A. nosocomialis* than for *A. baumannii*. There was an area with poor separation for *A. baumannii* (17-21 mm), meanwhile, for *A. nosocomialis* 19 mm and 20 mm were defined as susceptible and resistant, respectively.

The proposed breakpoint values for tigecycline may be a valuable tool in antimicrobial resistance monitoring to identify antimicrobial resistance, specifically performing MIC for this antibacterial agent is demanding and multifactor error driven.

Biography

Himen Salimizand has completed his MSc. from Pasteur Institute of Iran and currently works in Kurdistan University of Medical Sciences as researcher. He has published more than 25 papers in reputed journals.

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