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## Systematic review and meta-analysis on the efficacy of delafloxacin for treating ABSSSI (Acute Bacterial Skin and Skin Structure Infections)

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**Background & Aim:** Acute Bacterial Skin And Skin Structure (ABSSSI) infections can cause a significant amount of morbidity and mortality in hospitalized patients and outpatients as well. Emerging resistance of Gram-positive pathogens to different drugs has narrowed down our options for treating skin infections. Newer antimicrobials such as delafloxacin might prove to be a useful alternative to treat skin infections caused by resistant Gram-positive pathogens. The objective of this review is to assess all the available evidence on delafloxacin in literature and compare its efficacy with drugs routinely used to treat skin infections.

**Methodology:** An extensive literature search was conducted using different databases. By using Pubmed, Embase and Cochrane central register of controlled trials 86 abstracts were screened for eligibility. A total of 6 studies were finally included in the narrative review and meta-analysis. The primary outcome in this review was to assess the microbiological cure at the end of the follow up period. Secondary outcome was clinical response and absence of the signs and symptoms at the end of the follow up period.

**Results:** A total of 86 abstracts were screened for review, out of the 86 abstracts, 25 studies were further screened for eligibility, only 6 studies were finally included in the narrative review and meta-analysis. By using RevMan Software Risk Ratio (RR) random effects model was used with 95% Confidence interval. The pooled efficacy of Delafloxacin was at 80% 95 CI 1.01 (0.97, 1.06) P=0.51. No statistically significant difference was found between Intravenous (IV delafloxacin) and Comparator drugs.

**Conclusion:** Despite having a pooled cure rate of 80%, the efficacy of Delafloxacin was found to be non-inferior to tigegcycline and linezolid. Pooled cure rate and efficacy of Delafloxacin was also found to be superior to vancomycin. Therefore, it can be ascertained that Delafloxacin might prove as a useful alternative for treating resistant Gram-positive infections. However, more high quality randomized controlled trials, need to be conducted in future in order to develop clinical guidelines.

## Biography

Syed Bilal Tanvir has completed his MD in Medicine and a higher Masters in Clinical Microbiology and Infection Control from the Prestigious Queen Mary, University of London. He is currently working as a Faculty Member and Course Director of Infection and Host Defense and Disease Transmission and Infection control at Dar Al Uloom University, KSA, Saudi Arabia. He is also working as an infection control specialist at Dar Al Uloom University Hospital. He has published more than 12 papers in reputed journals and have presented his research internationally in Bahrain, Karachi and Jeddah previously.

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