



## Effect of Quinolones Versus Cefixime on International Normalized Ratio Levels After Valve Replacement Surgery with Warfarin Therapy

Anam Liaqat

*Riphah Institute of Pharmaceutical Sciences, Riphah International University, Pakistan*

### Abstract:

**Background and Objectives:** A dispute over interaction of warfarin with two quinolones i.e. moxifloxacin and levofloxacin leading to significant increase in international normalized ratio (INR) levels and coagulopathies is currently in debate. The study objective was to compare the INR values due to addition of quinolones and cefixime in warfarin treated patients after replacement of disease valves with metallic valves. **Material and Methods:** A prospective evaluation of patients who undergone valve replacement surgeries in the cardiology hospital set-up in Pakistan during the period 2018-2019 was done, including all those subjects treated concurrently with levofloxacin, moxifloxacin, cefixime and warfarin for the study. Data organized included demographic information, concurrent medications, and appropriate analytical parameters, especially INR values taken before and within seven days after prescribing three antibiotics in discharged patients who had undergone valve replacement surgeries. Patients for whom laboratory INR values were not given at the time of discharge and with deranged liver function, renal function, low albumin levels, and febrile patients were removed from study. Furthermore, patients were advised on possible food interactions and evaluated to examine if these factors have any possible influence on the interaction being studied. **Results:** Differences in INR were analyzed statistically by means of SPSS analysis before and after the possible interaction. Following the administration of levofloxacin and moxifloxacin to warfarin therapy, statistical analysis showed remarkable increase in INR ( $P = < 0.001$ ) and no significant change in INR was observed after cefixime treatment ( $P > 0.05$ ). **Conclusion:** Results showed that after adding levofloxacin



and moxifloxacin in patients on warfarin therapy contributed to remarkable increase in INR. However, addition of cefixime prevented frequent coagulopathies; therefore, close monitoring of INR and switching to safe antibiotic such as cefixime is recommended.

### Biography:

Anam Liaqat has completed her Master of Philosophy at the age of 30 years from Riphah International University Pakistan. She served in Armed Forces Institute of Cardiology National Institute of Heart Diseases, Pakistan as a clinical Pharmacist and supervised and developed INR clinic. She has published two case reports and one original article in 2019 in reputed journals.

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