

Effect of Ciprofloxacin versus Levofloxacin on QTc-interval and Dysglycemia in Diabetic and Non-Diabetic Patients.

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Abstract

Background: Levofloxacin and ciprofloxacin are more commonly used among fluoroquinolone class and the question of cardiac safety and glucose hemostasis of this class has been raised. Objective: To compare intravenous levofloxacin and ciprofloxacin regarding their risk on QTc prolongation and dysglycemia in diabetic and non-diabetic patients. Methods: A randomized prospective study at Beni-Suef university hospital was conducted on 200 adult patients over 6 months. The patients received intravenous levofloxacin 750mg once daily or ciprofloxacin 400mg twice daily. Electrocardiogram and fasting blood glucose were obtained from each patient before starting antibiotic, 24 hours, 72 hours after the first dose and 72 hours after antibiotics cessation. Results: The results of the current study showed the relative risk for QTc prolongation with levofloxacin was more than ciprofloxacin by about 4 and 1.5 in diabetic and non-diabetic patients, respectively. The relative risk for dysglycemia with levofloxacin was 2.28 and 1.39 times more than ciprofloxacin in diabetic and non-diabetic patients, respectively. Conclusion: The present study showed that the risk for QTc prolongation and hyperglycemia was greater with levofloxacin than ciprofloxacin in diabetic and non-diabetic patients. In addition, the risk for hypoglycemia was greater with levofloxacin than ciprofloxacin in non-diabetic patients.

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