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Al-Ani, I.M.^a, Algantri, K.R.^b, Nafie, E.M.^a, Al-Mahmood, S.M.A.^c

The nephrotoxicity of concurrent use of enalapril and gentamicin in rats

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^a Department of Basic Medical Sciences, Kulliyyah of Medicine, International Islamic University Malaysia, Kuantan, Malaysia

^b Department of Basic Medical Sciences, Widad University College, Kuantan, Malaysia

^c Department of Basic Medical Sciences, Kulliyyah of Nursing, International Islamic University Malaysia, Kuantan, Malaysia

Abstract

Objective: The present study was aimed to assess the concurrent administration of Enalapril (ENAL) and Gentamicin (GM) in the kidney of rats. **Methods:** Sixty male Sprague Dawley rats were divided into 4 main groups (n=15) according to the administered dose. Each main group was further subdivided into three subgroups according to the day of sacrificing (n=5). Group (C) was administered daily with normal saline as control, Group (E) was treated with oral ENAL, Group (G) was treated with 75 mg/kg GM, and Group (EG) was treated with GM and ENAL. The handling of the experiment persisted daily for 15 days, and the investigational examination carried out on days 5, 10, and 15. **Results:** The result showed that GM nephrotoxicity augmented with the period of the experimental study, there was rising in the levels of serum creatinine and blood urea nitrogen on the 10th day and persisted in rising significantly during the period on the 15th day of the experiment. Administration of ENAL showed no significant alteration from those of controls. While the concurrent administration of ENAL and GM showed that ENAL gradually increased GM nephrotoxicity, these physiological retrogressions were accompanied with intensive renal histopathological deteriorations. **Conclusion:** The present study has revealed that the concurrent administration of ENAL enormously aggravated the functional and histological nephrotoxicity of GM in rats. © 2018 The Authors.

Author Keywords

Concurrent; Enalapril; Gentamicin; Nephrotoxicity

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Correspondence Address

Al-Mahmood S.M.A.; Department of Basic Medical Sciences, Kulliyyah of Nursing, International Islamic University Malaysia; email: sinan.almawla@gmail.com

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