



International Conference on Medicinal and Pharmaceutical Chemistry

December 5-7, 2016 Dubai, UAE

Low dose irbesartan has a renoprotective effect as high dose ramipril in diabetic rats treated with insulin

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Objectives: The aim of this study is to compare the efficacy of the anti-angiotensin drug, ramipril and irbesartan on the vascular protection of kidneys of streptozotocin (STZ)-induced diabetic rats (DR). **Methods:** 110 male albino rats were divided into 7 main groups. Group-1 (10 normal control rats; NC). Group-2 (10 rats) was injected intra-peritoneally with STZ (Diabetic Rats; DR). Group-3 (10 DR) is controlled by insulin. Groups 4 to 7 (20 DR), each is subdivided into two subgroups that received either low or high dose of ramipril or irbesartan with or without insulin. Two months post treatment, rat-tail blood was collected to measure: Fasting blood sugar, HbA1c, total serum proteins, albumin and lipid profiles. Urine was collected to measure albuminuria. Kidneys were isolated for histopathological study. **Results:** Biochemically, both ramipril and irbesartan (without insulin) lowered albumin concentration in urine samples especially at high doses. Histopathologically, there is no beneficial response of both drugs without insulin. Combination of insulin together with either drug has beneficial effects biochemically and histopathologically at high doses. Low dose irbesartan only has renoprotective effect in DR treated with insulin. The other biochemical parameters showed negligible response to both drugs. **Conclusion:** Low dose irbesartan and high doses of both drugs have renoprotective effect in DR treated with insulin.

Biography:

Abdulelah A. Thigah was born on December 19, 1992 and live in mecca, graduated from Umm Al-Qura university with bachelor's degree in medicine and surgery. interested in clinical researches and health promotion programs, looking forward to provide the best care and awareness to the community and to be one of the well known characters in his speciality as well as a great role model.