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Comparative study of Olmesartan and Ramipril on reduction of raised diastolic blood pressure in patient with age more than 50 years.

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Abstract
Hypertension is one of the risk factor for cardiovascular mortality. Antihypertensive drug is used to reduce blood pressure. In addition, angiotensin receptor blocker has shown beneficial effect for controlling target organ damage. Furthermore unlike ACE inhibitor these agents have side effect profile that is similar to that of placebo. Study was carried out for production of hypertension by psychogenic stress method. In pr esent work done by me antihypertensive effect of olmesartan and ramipril was compared with control and w ith each other .student test was done to compare result. It was found that blood pressure varied significantly across the three groups (P=.000).com pared to control group, blood pressure wash significantly less in both olmesartan and ramipril (p=.000). Reduction of blood pressure with olmesartan was more than with ramipril at the end of work. Olmesartan is more efficacious than ramipril as far as blood pressure reduction is concerned.
Keyword: olmesartan, ramipril, Antihypertensive effect.

Introduction

Hypertension is sustained elevation of the arterial pressure1.Essential feature of hypertensive heart disease is left ventricular hypertrophy2. Microscopically the cardiac myocytes are enlarged and contain large, hyperchromatic, box-car shaped nuclei. The main organs (target or end organs) that suffer the ravages of high blood pressure are the heart,brain,kidney, and blood vessels.3 . rampri l is a long acting ACE inhibitor which is widely distributed in the tissues4. ARBs are usefully combined with diuretics for the treatment of hypertension.5 It is advisable to take olmesartan at least 4hours before any of the bile –acid binding resins.

Material and Method

This work was done at the department of pharmacology of Lord Buddha Koshi Medical College & Hospital, Saharsa, Bihar. Regarding ethical aspect I had informed concerned authority of this college. The patients were grouped as control, olmesartan and ramipril for inducing rise in blood pressure. For studying rise in

blood,pressure psychogenic stress method was used.

Each group contained 10 patients. Blood press ure measured of all 3 groups for twenty days from the month of may to June 2016. The difference in blood pressure was observed.6

For this purpose patient with the age of more than 50,years were taken. Dose of olmesartan taken was 20 mg once daily and ramipril was 2.5 mg once daily.

Statistical Analysis

Data was presented in (mean + SEM) and were analysed using student's t-test and ANOVA were applied to compare significance between different groups ($P < .05$)7

Results and Discussion

Diastolic blood pressure change from baseline was measured for different groups. It was (19.48 +- .58), (14.84+ - .44) and (12.88 +- .56) respectively for control ramipril and olmesartan groups from baseline. The mean blood pressure in three group varied significantly [$F(2,27)=140.54$ $P=.000$] The mean diastolic blood pressure change from the baseline of olmesartan group was more than that with ramipril group [$t(18) = 8.06$ $p=.000$]. There was also more decline with olesartan than with control group[$t(18)=6.34$ $p=.000$]. In year 2015 omboni et. al did a research work and found that olmesartan had more potent arterial blood pressure lowering effect than ramipril.8

Conclusion

Olmesartan is more efficacious than ramipril as evident from above observation as far as diastolic blood pressure is concerned.

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