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PROSTAGLANDIN A_2 INDUCED BIOCHEMICAL CHANGES IN RAT

Ram Prakash
Department of Zoology , Dr. A.G.D. Bendale Mahila Mahavidyalaya **JALGAON**-425001

The effect of prostaglandin A_2 on proteins , lipids and carbohydrates contents in the kidney and adrenal gland have been recorded. Treatment with PGA2 caused depletion in protein contents, carbohydrates and accumulation of lipids in the kidney and adrenal gland. The results are significant and suggest for further study on key enzymes.

INTRODUCTION

Kidney medulla possesses PGE_2 and PGA_2 with potent antihypertensive and natriuretic activities (Lee,1956). These compound may act intrarenally to regulate renal blood flow and excretion of sodium and water. PGA_2 originates from the conversion of PGE_2 and may function as circulatory hormone (Larsson and Anggard (1973). Inflammatory effects of prostaglandins include vasoconstriction and vasodilation(Hortoan and Main ,1964). Accelerated rate of water and electrolyte excretion in human after PGA_2 treatment was also noted (Mitsuhashi and Ito,). However it was reported that all prostaglandins caused erythema (solomon *et al*.1968).Prostaglandins were proposed as functional vasodilators in the adrenal glands (Grant 1968). Moreover PGE_1 cause increased adrenal blood flow when infused directly into the adrenal of the sheep (Blair-West *et al*. 1971).Inspite of all these experimental evidences available , very few attempts have been made to observe their interactions with tissue proteins ,lipids and carbohydrates .Present study deals with the effects of prostaglandin A_2 on total proteins ,lipids and carbohydrates in the kidney and adrenalgland of albino rat.

MATERIAL AND METHODS

Three *months* old , twenty healthy rats were selected from the laboratory stock at random and were divided into two group each containing ten animals .each animal was housed separately in a suitable cage ,fed on standard laboratory diet, water *ad libitum* and maintained under uniform laboratory conditions as reported earlier(Prakash,1989). A stock solution of 1.0mg/ml in absolute ethanol of PGA_2 (Upjohn Co.USA) was prepared ans stored at 4^0C. It was diluted by adding 0.1 ml of 0.25 M phosphate buffer (P^H 6.5). A sublethal dose (0.2ml) of this diluted solution was injected intramuscularly to each rat of the group a for30 days.rest ten animals of group b injected with 0.2 ml of olive oil and served as controls .After thirty days , all animals were killed by decapitation on 31st day in morning after starvation of 24 hours. Both the kidneys and adrenal glands were remover carefully ,weighed and were

* Corresponding Author