INTRODUCTION

Momordica charantia (MC) is a medicinal plant that have served through the ages as the mainstay in the treatment of variety of diseases and preservation of human health. Estrogen (E2) has been demonstrated to exert beneficial effects on kidney. Consequently, the aim of the present study is to investigate the estrogenic effects of MC fruit extract (MCE) on the kidney of rats.

MATERIALS and METHODS

Female rats were separated into four groups: (i) sham; (ii) ovariectomy (OV) rats; (iii) OV+E2 (250 µg/kg, im) and (iv) OV+MCE (2g/kg, orally). A structural change in kidney was examined on the light microscope by means of H&E staining. The tissue levels of oxidative status markers such as MDA, GSH, SOD, CAT, GST and MPO levels were measured in kidney.

RESULTS

Kidney MDA levels increased in OV and decreased with MCE or EST treatment. SOD, GST and MPO levels were not significantly different among treatment with OV. GSH and CAT levels increased with MCE or EST treatment in OV rats. Control animals showed normal kidney histology. The glomeruli were well demonstrated with normal Bowman space. OV kidney showed atrophy of the glomeruli and the tubules were fairly preserved. Administration of the extracts and EST improves cellular regeneration which is quite prominent in OV. The histopathological findings indicated that there were no histopathological lesions observed in the OV experimental groups treated with MCE fruit extract.

CONCLUSION

From this study, we inferred that Momordica charantia administered in OV rats have antioxidant and protective properties that could prevent damage to the kidneys.

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