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Apigenin attenuates heart and kidney function against adenine induced chronic kidney disease in experimental rat model by targeting HO-1 and PLA-2 expression.

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Objectives:

In the current scenario, chronic kidney disease (CKD) is a very common health issue which affects the human worldwide. Inflammation and oxidative stress is considered as one of the most important factors in early stage progression of CKD. There is currently limited efficacy in treating this issue, so the purpose of the present study was to test the effect of drug apigenin on adenine induced Chronic Kidney and related cardiovascular diseases in rats and its underlying mechanism.

Methods:

Apigenin was provided along with the diet to all the rats for the 8 weeks. Serum was used to assess the biochemical parameters (kidney profile and heart profile). Biomarkers were used to estimate the HO-1, TNF- α , PLA-2 and TGF- β for possible mode of action.

Results: Diet supplemented with adenine has enhanced the characteristics of chronic kidney diseases such as glomerular fibrosis, renal hypertrophy, level of uric acid, fibrosis, blood pressure, inflammation and heart related problem. Apigenin improved the structure and function of the kidney and heart, decreased expression of HO-1 and PLA-2. Reduced of PLA-2 and HO-1 expression seems to be possible mode of action in the management of the reno-and cardiopathy

Conclusions:

Our findings verified that treatment with Apigenin reversed the chronic kidney and heart related diseases in adenine induced CKD rats by targeting HO-1 and PLA-2 expression.