EFFECT OF A NOVEL PHYTOTERAPEUTIC ON DNA SYNTHESIS AND LIVER ENZYME RELEASE IN EXPERIMENTAL LIVER DAMAGE

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The purpose of this study was to see whether K-17.22, a controlled herbal remedy which is used in clinical practice in HCV liver disease and had been successfully tested by us in previous experimental studies, could exert any beneficial effect on plasma and liver tissue parameters of hepatotoxicity as well as on liver DNA synthesis activity.

Wistar rats were put on 2-week supplementation as follows:
A) standard diet or
B) as A plus K-17.22 (50mg/kg/day).

Afterwards, alpha-naphtyl-isothiocyanate (ANIT) liver injury model was applied. At sacrifice liver tissue samples were used to measure GSH, GSSG, GSH-Px and DNA synthesis rate by radioactivity counting. Group A rats showed a significantly increased levels of GOT, GPT, ALP, T. Bilirubin, lipid peroxide and MDA ($p<0.001$ vs control). All these parameters significantly decreased, although remaining abnormal, in group B rats ($p<0.05$ vs A) and the in vitro release of GOT, GPT and ALP from group A rats significantly decreased when aqueous solution of K-17.22 was added ($p<005$). ANIT caused a nearly 50% decrease of DNA synthesis in liver slices ($p<0.01$).

However, such effect was virtually preserved by K-17.22 ($p<0.01$ vs A). Moreover, liver GSH significantly decreased while GSSG decreased in A group ($p<0.01$ vs control). However, such effects were prevented by K-17.22 administration ($p<0.05$ vs A).

These preliminary data suggest that K-17.22 exerts a significant protective effect in liver toxicity model and offer a potential tool in an integrative treatment of HCV chronic liver disease especially in view of HCC transformation.