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Hepatology Highlights

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Phytotherapeutic compound YHK by F. Marotta et al.

This study reports on the effect of an herbal compound (named YHK) on an animal model of hepatocellular carcinoma. Rats were given diethylnitrosamine with or without the herbal mixture, followed for 15 weeks, and the appearance of liver tumor compared in the two groups. Surprisingly, YHK administration was associated with both a reduction in the number of cells positive for glutathione-S-transferase, a marker of preneoplastic cell lesion, and in the number and volume of neoplastic lesions in the liver. This is potentially good news since we need alternative effective treatments for this increasingly frequent cancer but needs to be regarded with caution when we translate the results to humans. YHK is a mixture of different herbs shown to have some effect on the oxidative stress *in vitro* and *in vivo*. It is therefore difficult to understand the active compound(s) among the herbs leading to the impossibility to study the molecular basis of the effect and preventing proper pharmaceutical studies. In addition, the efficacy of YHK in humans remains to be firmly established thus claiming for additional caution. Last, but not least, diethylnitrosamine-induced liver tumor in the rat is rather different from liver cancer in humans. In spite of these limitations, the message may be important in the future and we hope that the same studies will be performed either in more representative animal models of hepatocellular carcinoma and/or in a prospective, randomized study in humans.

Response of native Estrogen-Receptor by J. Garcia-Leiva et al.

Tamoxifen (TMX) is a blocker of estrogen receptor which is extensively used in the treatment of breast cancer. TMX is also used in liver tumors but its efficacy is still debated as conflicting data has been reported ending to opposite conclusions. In this study a rather limited number of patients with clinically comparable hepatocellular carcinoma (HCC) were divided in 2 groups, one receiving TMX and the other serving as control. Unfortunately the number of patients receiving the drug was exactly half of those without treatment and no reason is given for this unbalanced distribution. The results are interesting since the patient receiving TMX survived almost 3 times longer that those without TMX and most intriguing, this effect was not related with the presence of estrogen receptors in liver cells. This suggests that the effect of TMX is not solely related to the antireceptor activity but other, still to be defined activities (interference with calmodulin, inhibition of cellular pathways, etc.) may be present. But is really only TMX which makes the difference? Probably not, as suggested by the expected finding that the overall liver functions accounts for survival. Patients with a bilirubin level below 2.5 mg/dL live 3 times longer that those with high bilirubin and the same is true also for Okuda and possibly for Child-Pugh score. The take home message seems to be that TMX may be used in those patients where nothing is left of the standardized effective treatments of hepatocellular carcinoma although the functional liver will predict the overall survival in the single patient.

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