SUMMARY

The sequential effects on 3'Me-DAB hepatocarcinogenesis after centrolobular injury induced by CCl_4 or periportal injury induced by AFB_1 was studied in rats. The animals were pretreated with a single dose of either CCl_4 or AFB_1 till 72 h lapsed then they were fed on 3'Me-DAB diet. Biochemical as well as histological evaluations of the liver were performed at various time intervals.

Pretreatment with CCl_4 or AFB_1 caused liver cells damaged or necrosed resulted in the marked increased of the SGOT, SGPT and alkaline phosphatase activities but decrease in glucose level during 24-72 h period. Either AFB_1 or CCl_4 enhanced the toxic effect of 3'Me-DAB expressed by growth retardation, high mortality during wk 1-3. The increase of serum enzymes SGOT,SGPT and alkaline phosphatase activities were observed throughout the experiment. In contrast to the serum enzymes, serum protein level particularly albumin was reduced. Blood glucose level was slightly affected.

AFB_1 pretreatment seemed to have some enhancement on 3'Me-DAB hepatocarcinogenesis evidenced by an early appearance of cholangitis, cholangiofibrosis and nodular hyperplasia at wk 2-4. The liver lesions in rats pretreated with CCl_4, olive oil or DMSO followed by 3'Me-DAB diet did not show any different in time course of development. In addition, the tumor incidences at wk 24 in all 3'Me-DAB fed rats regardless of pretreatment were equal. Histological study of tumors revealed the mixed patterns of glandular and trabecular types of liver cell carcinoma. A low incidence of cholangiocarcinoma was also noted in AFB_1 and olive oil pretreated groups at wk 24.

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