124. BIOCHEMICAL STUDIES ON HEPATIC FIBROSIS (X) CLINICAL USE OF LATHYROGEN (β-MERCAPTOETHYLAMINE), AND CHARACTERISTICS OF PLASMA MONOAMINE OXIDASE RELATED TO COLLAGEN METABOLISM

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It was shown that a monoamine oxidase was closely involved in cross-link formation of collagen fibrils.

In this paper, some characteristics of monoamine oxidase derived from connective tissue, liver-mitochondria and plasma was compared with each other. It was found that monoamine oxidases from connective tissue and plasma were non-flavin and copper containing, inhibited by several lathyrogens and moved toward cathode in starch gel electrophoresis.

Contrarily, monoamine oxidase derived from mitochondria of liver have flavin and copper, and the activity of the enzyme was accelerated by the lathyrogens. Electrophoretically, the enzyme showed the mobility toward anode.

In previous reports it was demonstrated, the activity of monoamine oxidase in plasma was elevated moderately in chronic hepatitis and markedly in liver cirrhosis.

In clinical trial, β-mercaptothylamine, one of lathyrogens, was administrated to about 30 patients with liver cirrhosis or chronic hepatitis. In these patients, plasma OH-proline increased up to 2 or 3 weeks and then decreased below the level before the administration.

Urinary OH-proline was remained unchanged. The activity of plasma monoamine oxidase decreased gradually from the begin after the administration.

In addition to these results above mentioned, there was observed to be a tendency to decrease with S-GOT and S-GPT, but not with S-alkaline phosphatase.

125. ON THE EFFECT OF NEW PHENOBARBITAL DERIVATIVE ON INDIRECT HYPERBILIRUBINEMIA

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Though the effect of phenobarbital on jaundice of Gilbert's syndrome was well recognized, the severe side effects make clinical use difficult. 5-n-Butyl-1-cyclohexyl-2, 4, 6-trioxoperhydropyrimidine (® Paramidine) [P. N.] is commercially available phenobarbital derivative which has no hipnotic effect, and is said to develope seldom allergic reactions. P. N. is found to have much less inductive effects of drug metabolising enzymes as compared with phenobarbital. The effect of P. N. on indirect hyperbilirubinemia was observed in three cases of Gilbert's syndrome and other cases. Serum bilirubin in Gilbert's syndrome cases (3~4 mg/dl) decreased to lower levels (1.8~1.0 mg/dl), and their jaundice of skin reduced considerably during medication of two weeks. In a case of shunt hyperbilirubinemia (serum bilirubin around 4 mg/dl with most indirect pigment), phenobarbital decreased bilirubin level to less than 2 mg/dl, but bilirubin elevated to the old level when the drug was discontinued. However, bilirubin was kept lower level when P. N. was given after the second phenobarbital therapy. In electron microscopic observation of the liver biopsy specimens obtained from two cases of Gilbert's syndrome, smooth endoplasmic reticulum showed proliferation as reported following phenobarbital administration. Salicilamide was given orally and fraction of glucuronide in urinary excreted salicilamide was determined after treatment of β-glucuronidase during P. N. administration. In a case of Gilbert's syndrome, glucuronide fraction increased two times more than before administration on day 7 and decreased on day 14. In two cases of liver cirrhosis, changes of glucuronide fraction following P. N. administration showed the same tendency as it was observed in Gilbert's syndrome. In cases of various diseases that showed about 40% of glucuronide fraction, the percentage was not changed by P. N. administration.