CONCERNING EXTRAHEPATIC CHOLESTASIA IN VIRAL HEPATITIS

V. Zozikov, P. Petkov, I. Arshikov

Disorders in the metabolism of biliary pigments in viral hepatitis are usually of the hepato-parenchymal jaundice type. A number of mechanisms constitute the genesis of the latter, namely: tissue destruction (direct relationship between biliary and blood capillary systems), functional cellulary derangements (disturbances in bipolarity, permeability and glucoronoid capacity) etc. Recently, intrahepatic mechanical stoppage of bile flow has been frequently mentioned on account of the same disease (the so-called cholestatic or cholangiolitic form). However, the problem of the eventual presence of extrahepatic mechanical factors in the genesis is insufficiently clarified, or more correctly, their role in the intensification and prolongation of the icterus in viral hepatitis. The question is concerned about the lymph nodes ad portam hepatis. Being substantially enlarged in instances of hepatitis in their capacity of regional lymphatic barriers, couldn't they contribute for the biliary congestion by way of external compression of the major biliary ducts?

Some authors (Holler, Beiglböck — quoted by Siede (9)) draw a particular attention to the generalized hyperplasia of the lymph nodes in this condition, considering it furthermore, as its most characteristic feature. Holler moreover, coins the disease with the term "infectious reticuloendotheliosis" — quoted by Stanchev (3). The latter opinion is not condivided by all the authors (9). And yet, single reports are found in the literature related to considerable increase of the portal lymph nodes during acute and chronic hepatitis, proved obductionally (Wallgren, Selander — quoted by Siede (9)) or operatively (Gerota and assoc. (5)). The relationship of these lymph nodes however, has not been elucidated insofar genesis and character of the icteral syndrome observed is concerned. According to Popper and Schaffner (7), extrahepatic (compressive) jaundice is noted merely in malignant outgrowths (primary or metastatic) of the portal lymph apparatus infiltrating the bile ducts and thus securing fixation. Similar forms of jaundice, by rule, are very seldom (8). Enlarged lymph nodes ad portam hepatis were the cause for cholestasia merely in nine cases of the series observed by Watson (10) including 128 patients with extrahepatic compressive icterus. Among the remainder tumorous-like enlargements in the same region (leukosis, lymphogranulomatosis, tuberculosis, infectious mononucleosis), manifested cholestasia is recognised still more rarely — merely in exceptional cases (2, 4, 8).

Recently, we had the possibility of observing a rare clinical case, deserving a special consideration on account of the statements herein made as well

as on account of substantial diagnostical and therapeutical difficulties related to it:

Case report — *Lefter M., aged 23; history of illness № 2539.* He fell ill of epidemic hepatitis in August 1963 and underwent treatment at the infectious department of the hospital in the town T. He had a grave course and was unconscious for nearly two days. By the way, he was also treated with cortisone. He was dismissed on his insistence, not completely cured, on the 23rd day of hospitalization. One month later he sustained a recurrence and was readmitted for hospital treatment. In ten days he was discharged with a slight icterus.

At the infectious diseases clinic of the Higher Medical Institute in Varna the patient was referred on 20 December, 1963 with phenomena of adynamia, anorexia, moderately pronounced jaundice and hepatomegaly (3 cm beneath the costal arch, dense elastic consistency).

Laboratory findings: (investigations carried out repeatedly).

Urine: persistent bilirubinuria and hyperurobilinogenuria; erythrocyte sedimentation reaction, leuko- and hemogram: normal; MacLagan: 80—95 U; Weltmann: VIII test-tubes; seral bilirubin: 3.0—7.9 mg % (mainly direct); Proteinogram: total protein normal, albumins — 40—45%, gamma-globulins — 28—31 %; Transaminase (SGPT): 340—250 U; serum iron: 256 gamma %; total cholesterol: 256 mg %; Weinberg — negative; fluoroscopy of the stomach, duodenum and bile ducts — within normal limits.

Dietary and therapeutical regimens (vitamins, dehydrocortisone, biomycin, plasma transfusions and glucosis, Karlsbad salt etc.) resorted to did not bring about the results anticipated. The icterus, hepatomegaly, subjective complaints and abnormal paraclinical findings persisted over the three-month hospitalization period of the patiet in our clinic. It was assumed that very likely a chronified viral hepatitis case was concerned with protracted cholestasia, without evident tendency for improvement under the effect of the conservative therapy applied. However, we could not discard with certainty the possibility for some other cause accounting for the continuous biliary retention — for instance, mechanical subhepatic obstruction. By virtue of the circumstances existing, accordingly described, it was decided to resort to surgical intervention — periarterial neurectomy after Marret-Guy. The operation was performed at the Propedeutical surgery clinic of the Higher Medical Institute in Varna on March 7th, 1964. At the operation the liver was found with raised consistency. The portal lymph nodes exhibited tumorous-like enlargement (measuring 2—3 cm in diameter) and enveloped the hepatic artery and the bile duct. During partial neurectomy and extirpation of lymph nodes in the vicinity of the common bile duct, the nodes were abundantly bleeding. On sectioning they exhibited cystic changes and from the cyst lymph was discharged. The biopsy of a hepatic section revealed mesenchyme inflammatory process with overloading of biliary pigment cells, whereas the biopsy of a piece from the lymph node — the characteristic picture of reaction in chronic nonspecific process with pronounced reticular hyperplasia (investigator: ass. prof. K. Popov, M. D., Chair of Pathoanatomy — Higher Medical Institute, Varna).

The postoperative period was uneventful. The jaundice abruptly subsided and completely disappeared rather quickly. On the 5th postoperative day no more bilirubin was contained in the urine. On the 10th day the serum bilirubin was 0.5 mg %. On the 14th day the patient was dismissed in a very good general condition.

In the course of subsequently carried out systematic follow-up studies for more than one and a half years, the patient was invariably with high spirits and anicteric. The liver was palpated over the costal arch and was not painful. The serum bilirubin was persistently beneath 1 mg%. The MacLagan test continued to be positive (80—85 U) whereas that of Weltmann — protracted. Moderately pronounced hypoalbuminemia and hypergammaglobulinemia.

Discussion and conclusions

The changes in the regional lymph pool ad portam hepatis in the case herein described consist in: lymph stasis, hyperemia and hyperplasia of the lymph nodes. The latter finding is distinguished both macro- and microscopically from the finding observed in pericholedochal lymphadenitis, frequently marked during operative interventions on account of calculous cholecystitis,

tuberculosis and other inflammatory processes in the same locality (6). Strongly manifested periadenitis, fibrosclerosis of the hepato-duodenal junction and local inflammatory reaction on behalf of the peritoneum are usually present in similar cases; the enlargement of the lymph nodes proper is rather slightly pronounced and thus, it is assumed that causal relationship with incidentally observed jaundice is non-existant.

In the patient herein reported, the tumorous-like outgrowth of the portal lymph nodes, developed in the course of severe and protracted viral hepatitis, led to a lasting, though partial extrahepatic biliary stasis. The latter caused not merely the prolonged duration of the jaundice (more than seven months), but very likely — the chronification of the morbid process in the liver. The macroscopic findings in the area involved were likewise in favour of this statement, as well as the prompt and good therapeutical effect of the operative intervention undertaken. The latter successfully restored the patency of the extrahepatic biliary system and thus, greatly contributed to the attenuation or full disappearing of a number of symptoms in the patient discussed.

We feel that in a determined number of "cholestatic" ("cholangiolitic)" forms of viral hepatitis, with suspected intrahepatic biliary stasis, virtually pathogenetic mechanisms of extrahepatic nature are very probably concerned, analogous to those of the patient herein described. Therefore, the presence of compressive extrahepatic cholestasia, caused by excessively enlarged portal lymph nodes, should always be suspected when indications are discussed for operative management of protracted icteric forms of viral hepatitis.

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О ВНЕПЕЧОНОЧНОМ ХОЛОСТАЗЕ ПРИ ВИРУСНОМ ГЕПАТИТЕ

В. Зозиков, П. Петков, Й. Аршиков

РЕЗЮМЕ

Обсуждается отношение регионарного лимфаденита ad portam hepatis к степени и длительности желтушного синдрома и патологического процесса в печени при вирусном гепатите. Описывается случай тяжелого и протрагированного вирусного гепатита у 23-летнего мужчины, у которого чрезвычайное увеличение портальных лимфатических узлов является причиной значительного (семимесячного!) продления желтухи. Оперативное удаление опухолевидно увеличенных лимфатических узлов вокруг желчного протока привело к быстрому и полному исчезновению желтухи и остальных симптомов у больного. Авторы допускают, что и у известной части холостазных (холангиолитных) форм вирусного гепатита, при которых обычно предполагается наличие внутрипечоночного холостаза, может быть, существует подобный внепеченочный патогенетический фактор. Вот почему, в показаниях к оперативному вмешательству при протрагированных желтушных формах вирусного гепатита должно фигурировать и сомнение в компрессионном внепеченочном холостазе, в результате сильного увеличения портальных лимфатических узлов.