

Child's Classification & Hepatocellular Carcinoma

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This study was done to find out the relationship between child's classification and HCC 26 patients with both HCC and liver cirrhosis were included in the study 13(50%) cases, were in child class B, six cases (23.9%) in child class A & 7 cases (26.9%) in child class C. This study showed higher frequency of HCC in cirrhotic patients in child class. B & C as compared with child class A.

Key words: Hepatocellular carcinoma child's classification

HCC is the most common primary malignant tumour of the liver¹. About 75% of all HCCs world-wide are associated with cirrhosis². Cirrhosis is the end result of chronic hepatocellular necrosis, inflammation, and fibrosis, and is defined morphologically as a diffuse process with septal fibrosis and regenerative nodules³. Active proliferation as evidenced by the presence of large or macroregenerative nodule has been considered as marked by cellular enlargement, nuclear pleomorphism and multinucleate cells, may also be a contributory factor⁶. In fact it has been postulated that cirrhosis may be a premalignant condition irrespective of etiology. These include cirrhosis following infection with hepatitis B and C viruses^{8,9} inherited metabolic disease such as genetic haemochromatosis⁹. Alfa-I antitrypsin deficiency¹⁰, and Wilson disease¹¹ HCC is also seen in autoimmune liver disease such as primary biliary cirrhosis¹², and autoimmune hepatitis¹³.

Patients and Methods

Twenty six patients diagnosed to be suffering from HCC and cirrhosis were included in the study. The diagnosis was made on the basis of history, examination and investigations including serum bilirubin, Serum Albumin and prothrombin time.

HBs Ag, anti-HCV were evaluated by ELISA method in each patient. Alfa fetoprotein was checked in each patient to aid in the diagnosis of HCC and was confirmed on fine needle aspiration cytology and in some cases with core liver biopsy, under ultrasound guidance.

Results

In this study out 26 patients having HCC live cirrhosis 13 cases (50%) were in child class B, 6 cases (23.9%) in child class A, and 7 cases (26.9%) in child class C, (Table 2).

Discussion

Results of this study have shown clear association between cirrhosis and HCC. Moreover, the risk increases with passage of time. Kiyasowa found that the length of time from initial diagnosis to development of cirrhosis and HCC were 21, 29 years respectively¹⁴. Hepatitis viruses hasten the process of carcinogenesis in cirrhotic liver as compared with non cirrhotic liver 8, Colombo et al

followed 447 Italian patients with well compensated cirrhosis. HCC was found in 7% of these cases with good liver reserve at the base line. Another 7% developed HCC during the average follow-up period of 33 months¹⁵.

Table 1.

Group Designation	Child class		
	A	B	C
Serum bilirubin (mg/dl)	<2	2.0-3.0	>3.0
Serum albumin g/dl	>3.5	3-3.5	<3.0
Ascites	None	Easily controlled	Poorly controlled
Neurological disorder	None	Minimal	Advanced
Nutrition	Excellent	Good	Poor wasting

Table 2.

Total No. of patients	Child class		
	A	B	C
26	6(23.9%)	13(50%)	7(26.9%)

A multicentre Italian study done in 1,829 consecutive cirrhotic patients showed that HCC developed in 19.9% patients in child's class C, 16.9% in child's class B and 8.3% in child's A²⁰. This suggests that there is higher frequency of HCC in cirrhotics with progressive deterioration of liver function. This seems consistent with our results.

Child's classification has been used as an important guideline for the degree of hepatocellular dysfunction, but it may be used as an important predict or of HCC. Patients with HCC and cirrhosis, it has been shown that factors related to cirrhosis i.e., deteriorating liver functions contribute to prognosis in addition to tumour related factors¹⁸. Increasing level of serum bilirubin, low albumin, ascites and prolonged prothrombin time have been used to stage HCC in addition to tumour size, age and presence of metastasis^{17,18}. Prognosis has been correlated with child's score^{16,17}.

Whatever the biological meaning of the association between cirrhosis and HCC, this association provides a formidable tool for screening patients who are at risk of HCC. This can be done through periodic examination of alpha-fetoprotein and abdominal ultrasound for detection

of small HCC. Diagnosis of HCC can be confirmed histologically. Early diagnosis leads to better prognosis¹⁹.

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