THE VALUE OF CLINICAL SIGNS IN DIAGNOSIS OF CIRRHOSIS

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ABSTRACT

Objective: To document the value of various clinical signs of cirrhosis in its diagnosis. It also reviews the current status of the disease.

Design: Observational and descriptive study.

Place and duration of study: Medical wards of PNS Shifa, Karachi and Jinnah Postgraduate Medical Center, Karachi, Pakistan from June 2002 to May 2003.

Subjects and Methods: One hundred and seventy diagnosed adult patients having an unequivocal evidence of cirrhosis on ultrasound examination of abdomen were included in the study. Two trained clinicians examined the cases and their clinical signs were recorded on a format specially designed to record the clinical signs. Age, gender, hepatitis status (hepatitis B, C, or other wise) was also documented.

Results: Sixty two percent were males and 38% were females. Patient average age was 53.2 years without gross age difference in the HCV positive and HBsAg positive groups.

Twenty eight percent were HCV positive, 22% were HBsAg positive, 10% had no evidence of previous infection of hepatitis B or hepatitis C and 40% had no record of these tests. Males dominated the HBsAg group compared to HCV positive group. Pedal edema was present in 92 percent of patients, ascites in 89 percent, jaundice in 64 percent, clubbing in 25 percent, palmar erythema in 23 percent, Terry's nails in 21 percent, testicular atrophy in 4 percent, gynaecomastia in 4 percent, pectoral area hair loss in 2.4 percent, leuconychia in 2.4 percent and hepatic encephalopathy in different grades in 19 percent. No spider navei, caput medusae and Dupuytren's contracture were noted.

Conclusion: We document that in current clinical practice the classical signs of cirrhosis expected to be present in advanced cases are observed quite infrequently and therefore, cannot be relied upon in clinical diagnosis of the disease alone. The diagnosis of cirrhosis should be supported by other means including ultrasound examination of the abdomen etc. Further multicenter studies should be conducted to consolidate our findings.

KEYS WORDS: Cirrhosis, etiology, clinical signs.

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INTRODUCTION

Cirrhosis is defined as "morphologically diffuse process characterized by fibrosis and transformation of normal liver architecture into structurally abnormal nodules.[1] These nodules could be regenerative or hyper-plastic. It is a diffuse process and not focal.[1] Cirrhosis can be classified as micro-nodular, macro-nodular or mixed-nodular.[2] It is difficult to classify cirrhosis only on morphological basis as one etiological agent may have various morphological presentations. Etiological causes include (1) alcoholic (2) post- necrotic (3) biliary cirrhosis (4) cardiac (5) metabolic (6) cryptogenic.[3] Thirty to forty percent of cases

of cirrhosis remain undetected and are noticed only at autopsy.[4,5] Therefore, the exact incidence of disease cannot be documented precisely. Males dominate the spectrum of disease but geographical variations are marked.[6] Compensated cirrhosis is clinically latent and is diagnosed only with careful clinical examination and biochemical screening. About 30-40% of cases of compensated cirrhosis may remain without clinical signs.[2] Those who become symptomatic present with general symptoms like asthenia, loss of weight and anorexia etc. The grave presentations are ascites, jaundice, hepatic encephalopathy and gastrointestinal hemorrhage.[7] The signs of cirrhosis mentioned in medical literature are spider navei, clubbing, Terry's nails, leuconychia, palmar erythema, Dupuytren's contracture, loss of pectoral area hair, testicular atrophy, gynaecomastia, jaundice and ascites.[8] Many of these signs[9] even in advanced cases of cirrhosis are not regularly observed in current medical practice. We undertook this study to document the frequency of these signs in advanced cases of cirrhosis in current clinical practice.

PATIENTS AND METHODS

Adult patients having cirrhosis of liver and admitted to PNS Shifa & Jinnah Post Graduate Medical Center from June 2002 to May 2003 were included in the study. These patients comprised of uniformed persons, civilians and their dependents, exhibiting clear evidence of cirrhosis of liver on ultrasound examination of abdomen. These patients were examined carefully for the presence of clinical signs. Various parameters regarding these patients were recorded on a proforma specially designed for this purpose. The parameters included gender, etiology of disease (Hepatitis 'B'& 'C' or other etiology), clinical signs at the time of presentation e.g. spider navei, clubbing, Terry's nails, leuconychia, palmar erythema, Dupuytren's contracture, loss of hair from pectoral area, testicular atrophy, gynaecomastia, parotid gland enlargement, jaundice, ascites, pedal edema and various grades of encephalopathy.

RESULTS

We included 170 cases of cirrhosis of liver in our study. One hundred and six (62%) were males and sixty-four (38%) females. Mean age was 53.2 years and there was no significant difference between the ages of the two genders. HBsAg positive cases had average age of 53.8 years and HCV positive 57.2 years. Forty-eight patients (28%) were HCV positive and thirty-eight (22%) were HBsAg positive. Seventeen patients (10%) had no markers of hepatitis 'B' or hepatitis 'C' while sixty-seven patients (40%) had no evidence of these tests ever been carried out (Table-I). Males dominated the HBsAg positive group compared to HCV positive group. (Males were 79% in HBV and 63% in HCV group). Mean duration of symptoms was 15 months. The clinical signs noted in our study are shown in Table-II.

Table-I: Etiology of cirrhosis
n=170

Disease	*No. of Patients*	*Percentage (%)*
HBsAg positive	38	22
HCV Ab positive	48	28
Non 'B' & non 'C'	17	10
Unknown Status	67	40

Table-II: Clinical signs of cirrhosis
n=170

Signs	*No. of Patients*	*Percentage (%)*
Pedal edema	156	92
Ascites	152	89
Jaundice	108	64
Clubbing	42	25
Palmar erythema	39	23
Terry's nails	36	21
Encephalopathy	32	19
Testicular atrophy	6	4
Gynaecomatia	6	4
Pectoral area hair loss	4	2.4
Leuconychia	4	2.4
Parotidomegaly	2	1.2
Spider navei	2	1.2
Dupuytren's contracture	0	0
Caput Medusae	0	0

DISCUSSION

In our study we found that chronic HCV infection was the etiological cause in 28% of cases and chronic HBV infection in 22% of cases. These figures are not much different than the one mentioned in a study conducted by Farooq and Farooqi.[10] In our study, 40% of patients had no evidence of these tests ever been carried out and 10% had no markers of hepatitis 'B' and hepatitis 'C' signifying the fact that other causative agents might be involved or these cases were suffering from "cryptogenic" cirrhosis. More than 50% of cryptogenic cirrhosis may show some evidence of HCV infection if further scrutinized.[3] Mean age of patients was above 51 years in both groups signifying slow progression of the disease and probably acquisition of disease in adult life.[11] Seventy nine percent of HBsAg positive and 63% of HCV positive patients were males pointing towards a possible causal relationship of hair cutting and shaving practices in males. This point was highlighted in a study done by Tumenelli.[12] Pedal edema was noted in 92%, ascites in 89% and both were the most frequent signs observed.[13] Studies carried out by Leveen et al documented that 5-10% of cases of ascites were also associated with pleural effusion.[13] In our study, none of the patients had evidence of pleural effusion, clinically or radiologically.

Jaundice was detected in 64% of cases. It resulted from both conjugated and unconjugated hyperbilirubinaemia. Chung et al found a large number of their patients to be jaundiced and ascitic due to complicated chronic liver disease.[14] Hepatic encephalopathy in grade 1-1V was noted in 32 patients (19%). Hepatic encephalopathy in decompensated cirrhosis is a known complication and was documented in appreciable number of patients by Jalan et al.[15] Palmar erythema was noted in 39 patients (23%) and gynecomastia was noted in only six (4%). Testicular atrophy was noted in 06 patients (4%), which is thought to be due to peripheral conversion of androgenic steroids to estrogens in tissues.[11] Clubbing was noted in 42 patients (25%), though this sign should have been more frequently observed in cirrhosis as documented in a study by Ebstein et al.[16] Terry's nails were noted in 36 patients (21%). Some of the other signs assumed to be the classical signs are barely observed in our study e.g. sparse pectoral hair in only 4 patients (2.4%), leuconychia in 4 patients (2.4%) and parotidomegaly in 2 patient (1.2%). Dupuytren's contracture and spider navei were not observed at all. Similarly, caput medusae, a sign due to collateral circulation in abdomen and mentioned in medical literature was not observed in our patients. We were unable to detect any study documenting the relative frequency of the various signs of cirrhosis and this holds true when various textbooks of medicine are scanned.[2,3,8]

CONCLUSION

We document that in current clinical practice most of the classical signs of cirrhosis expected to be present in advanced cases are not observed regularly and hence, cannot be relied upon in diagnosis of the disease alone. The diagnosis of cirrhosis should be supported by other means including ultrasound examination of the abdomen etc. Further multicenter studies should be conducted to consolidate our findings.

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