

Prevalence of Cryptogenic Cirrhosis among admitted hepatic cirrhosis patients.

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&

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Introduction

- Cirrhosis – A progressive, diffuse, fibrosing, nodular condition that disrupts the entire normal architecture of the liver.
- Cryptogenic cirrhosis – A cirrhosis where the cause could not be ascertained.
- Cause is there but it is hidden.

Objectives

- **General objective:**
 - To find out the Prevalence of cryptogenic cirrhosis among hospital admitted patients.
- **Specific objectives:**
 - To identify the etiology of hepatic cirrhosis among the admitted patients by clinical and pathological profile.
 - To find out the clinical and laboratory profile of patients suffering from cryptogenic cirrhosis.

Research Question

- What is the Prevalence of cryptogenic cirrhosis among admitted cirrhotic patients?

Material & Method

- **Type of study:** Cross Sectional Study.
- **Place of Study:** Dhaka Medical College Hospital
- **Study Population:** Clinically suspected cirrhotic patients admitted in different medicine units of Dhaka Medical College Hospital.
- **Period of study:** December 2008 to November 2009

Materials & Method

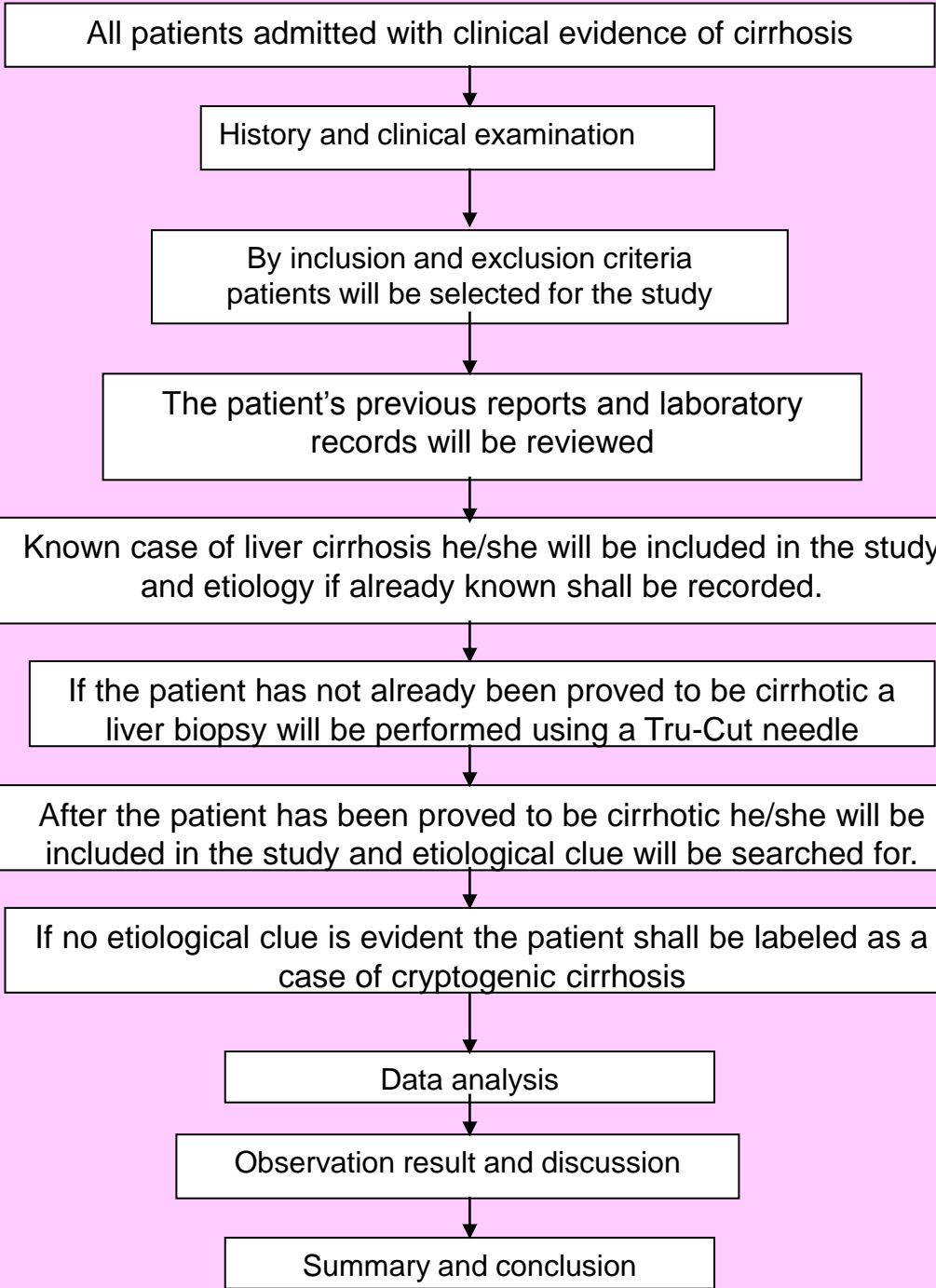
- **Sampling Technique:** Purposive sampling
- **Sample size:** According to the formula for finite population
$$Z^2pqN/d^2(N-1)+Z^2pq$$
Where
$$Z = 1.96$$
$$p = 0.1 \text{ (assuming 10\% have the condition)}$$
$$q = 1-p$$
$$d = 0.01$$
$$N = 186 \text{ (the number of cirrhotic patients admitted in DMCH in 2008)}$$
- The number required for the study stands at 176 cases
- **Ethical Consideration:** Informed written consent was taken from all patients prior to inclusion into the study and also from patients likely to be candidates for the study.

Inclusion Criteria

- Cirrhotic patients histologically proven by liver biopsy and/or
- Clinical and laboratory evidence suggestive of liver cirrhosis mostly in cases of patients in whom liver biopsy was contraindicated as per BGS Guideline.
- Age between 12 to 70 year.

Exclusion criteria

- Age less than 12 years or more than 70 years.
- Patients suffering from severe cardiac or renal ailment.
- Pregnant women.
- Cirrhotic patients not giving informed consent.



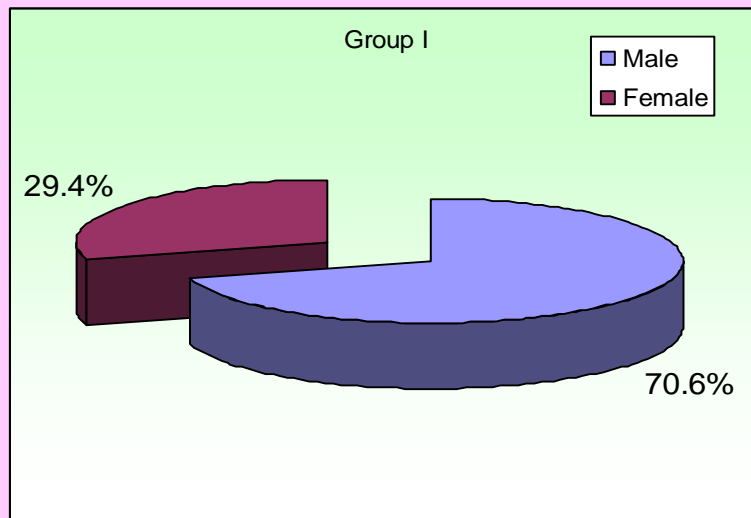
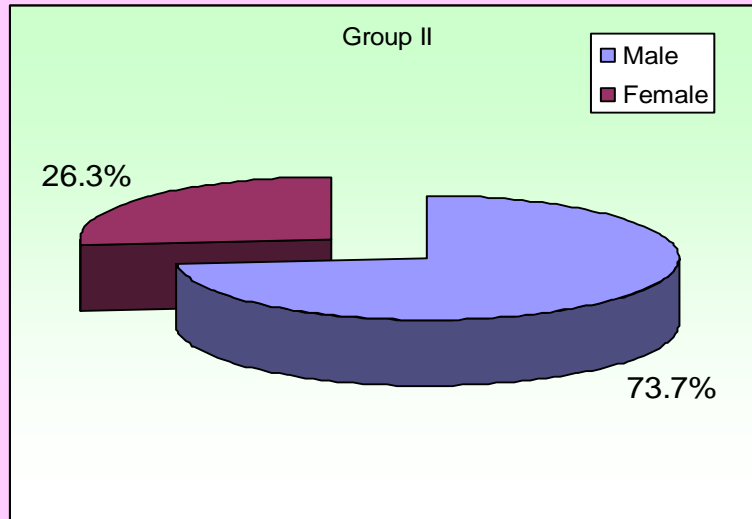
Results

Etiology	Number of patients	Percentage
Hepatitis B	72	55.0
Hepatitis C	23	17.6
Alcoholic	5	3.8
Wilson	4	3.1
Hepatitis B & C	4	3.1
Primary Biliary Cirrhosis	1	0.8
Cholesterol Ester Storage Disease	1	0.8
AutoimmunE	1	0.8
Hemochromatosis	1	0.8
Wilson & Hepatitis B	1	0.8
Glycogen Storage Disease	1	0.8
Cryptogenic	17	13.0
Total	131	100.0

Prevalence

- 5 to 30% proposed by Lee et al. 1989
- 5.0% in Pakistan (Almani et al 2008) out of 100 patients
- 10.4% in Mexico (Sanchez et al 2004) out of 1,486 patients.
- 43.1 % in Bangladesh in 1981 (Islam et al 1981)

sex distribution of the patients



- Male:female = 2.7:1
- No significant difference between groups
- In cryptogenic group male dominated
- Contrary to findings in developed world (Caldwell et al 1999). Female = 70%
- Study in Pakistan 40% female (Almani et al 2008) also the overall study showed male predominance
- Social culture of lesser admission of females

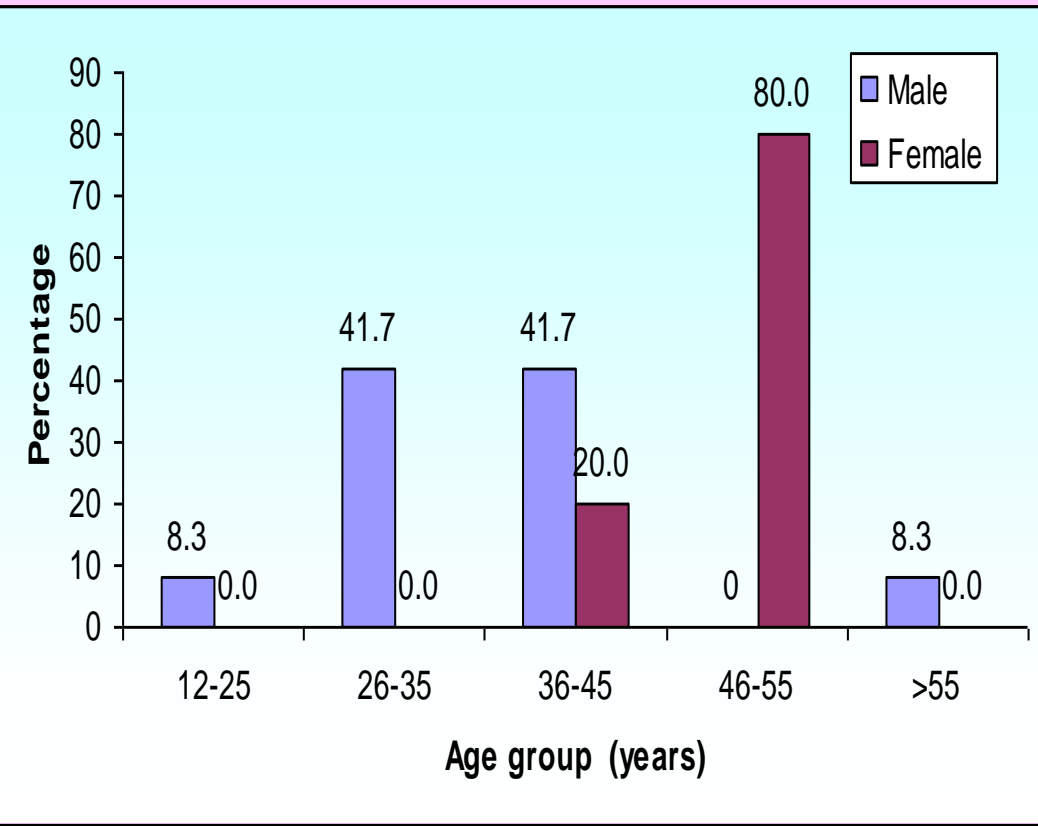
Distribution of the study patients according to sex by etiology.

Etiology	Male (n=96)		Female (n=35)	
	n	%	n	%
Hepatitis B	51	53.1	21	60.0
Hepatitis C	21	21.9	2	5.7
Wilson	2	2.1	2	5.7
Alcoholic	5	5.2	0	0.0
Hepatitis B & C	3	3.1	1	2.9
Wilson & Hepatitis B	0	0.0	1	2.9
Cryptogenic	12	12.5	5	14.3
Others	2	2.1	3	8.6

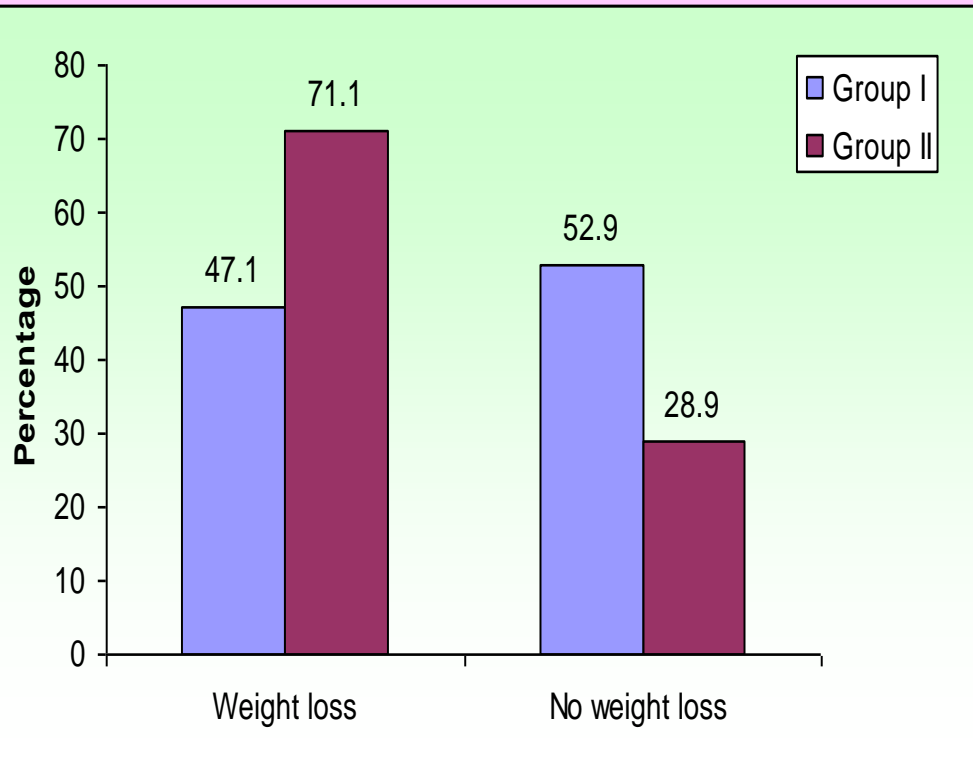
Age distribution of the patients

Age group (years)	Group I (n=17)		Group II (n=114)		p value
	n	%	n	%	
12-25	1	5.9	5	4.4	
26-35	5	29.4	14	12.3	
36-45	6	35.3	36	31.6	
46-55	4	23.5	38	33.3	
>55	1	5.9	21	18.4	
Mean \pm SD	40.1 \pm 10.4		46.2 \pm 11.1		0.073 ^{NS}
Range (min, max)	(14 -70)		(24 -62)		

- Male patients mean age 37.5 ± 10.0
- Female patients mean age 49.6 ± 5.5 ($p=0.024$)
- Male and female might have different etiology
- Occult hepatitis B and undiagnosed metabolic causes
- 4 out of 5 females were diabetic.



- Significant ($p < 0.05$) difference
- Less weight loss among cryptogenics
- Female showed no weight loss
- NASH might be the reason behind.



Hematemesis among the study patients

Hematemesis	Group I (n=17)		Group II (n=114)		P Value
	n	%	n	%	
No hematemesis	6	35.3	33	28.9	0.593 ^{NS}
Hematemesis	11	64.7	81	71.1	

Disorientation among the study patients

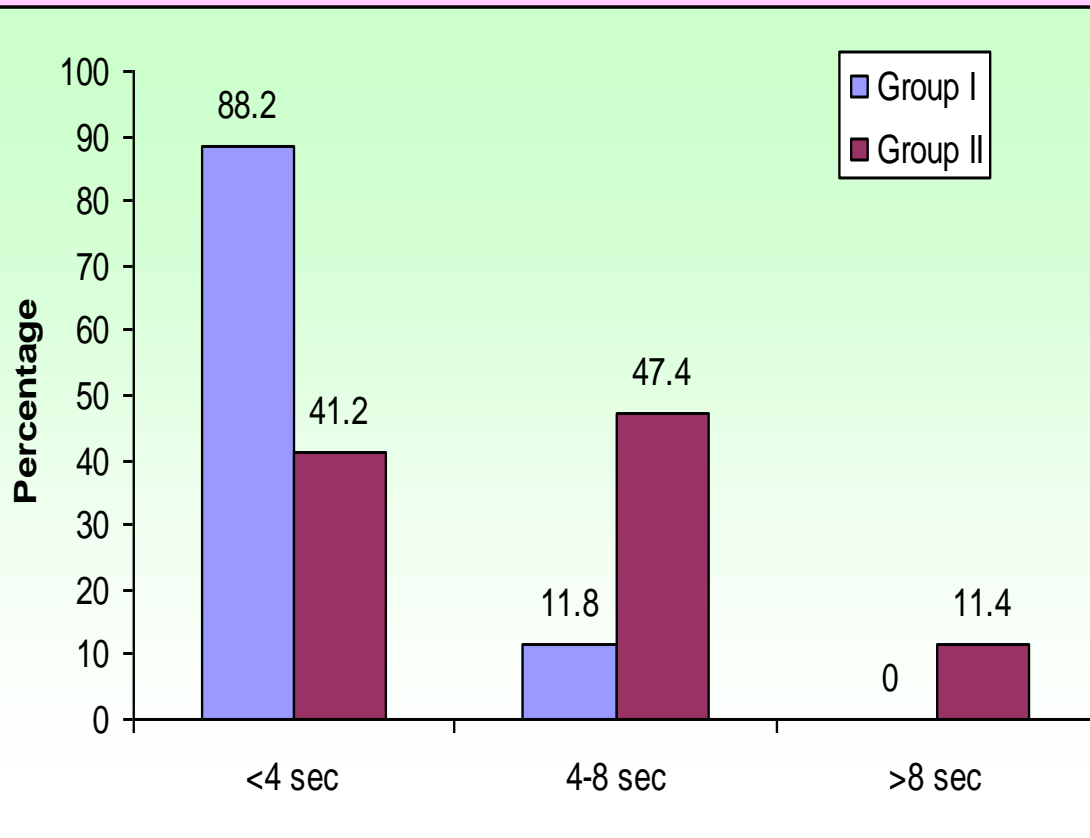
Disorientation	Group I (n=17)		Group II (n=114)		p value
	n	%	n	%	
No disorientation	9	52.9	73	64.0	0.378 ^{NS}
Disorientation	8	47.1	41	36.0	

SGPT of the study patients

SGPT	Group I (n=17)		Group II (n=114)		P value
	n	%	n	%	
<81	3	17.6	43	37.7	0.166 ^{NS}
81-120	12	70.6	53	46.5	
>120	2	11.8	18	15.8	

Majority of the patients had SGPT level 81-120 mg/dl

- Significantly lesser rise of PT among cryptogenic patients
- Similar results observed by Kojima et al 2006
- Almani et al 2008 showed a >5 sec rise of PT in 54% cases.



Majority 15(88.2%) of the patients had PT <4 sec in group I and in group II most 54 (47.4%) had PT between 4-8 sec.

Upper-GI Endoscopy of the study patients

UGI endoscopy	Group I (n=17)		Group II (n=114)	
	n	%	n	%
Normal	0	0.0	2	1.8
Grade1 Varix	1	5.9	0	0.0
Grade2 Varix	5	29.4	42	36.8
Grade3 Varix	4	23.5	56	49.1
Grade4 Varix	7	41.2	14	12.3

- 42.2% (7) patients with cryptogenic cirrhosis had grade IV varice other group mostly (49.1%) had grade III varices
- Caldwell et al. (1999) had shown that 30% cryptogenic cases had varices with out bleeding while 20% had varices with bleeding but had not mentioned the grading of the varix.

SOL (Space Occupying Lesion) found in the study patients

SOL	Group I (n=17)		Group II (n=109)		p value
	n	%	n	%	
Present	0	0.0	7	6.4	0.352 ^{NS}
Absent	17	100.0	102	93.6	

- SOL of the liver was found in 7 cases out of the 131 studied and none of them were cryptogenic cases. This is in lieu with previous studies as only one case of hepatoma was found out of 70 cases studied by Caldwell et al. (1999).

- 55.0% (72) of the cirrhosis was due to Hepatitis B virus.
- Similar to that found in other studies conducted in Bangladesh previously 61.15% (Afroz et al., 2007).
- Hepatitis C was found to be the second most common cause
- Similar to that observed by Afroz et al., 2007, 24.1% .
- Sánchez et al. study conducted in Mexico showed HCV (36.6%) as the second most common cause of cirrhosis
- Number one cause in Mexico was alcoholic cirrhosis
- In Pakistan the number one cause of cirrhosis was found to be HCV as found by Almani et al.

- The finding of alcoholic cirrhosis and Wilson's disease was at par with the regional study of Almani et al. (2008)
- HBV and HCV co-infection was higher in their (Almani et al., 2008) study (16%) than this one (3.1%).
- An interesting finding in this study was a case of Wilson's and Hepatitis B co-infection which might have been due to blood transfusion.

- Cryptogenic cirrhosis was in the 3rd position in this study as well as that conducted by Sánchez et al. (2004) while in Almani et al. study it was the 5th cause in Pakistan.

- Non-alcoholic steatohepatitis (NASH) is a chronic liver disease that is gaining increasing significance due to its large prevalence worldwide and the potential progression to cirrhosis and hepatocellular failure
- Bugianesi et al., 2002 found that the prevalence of obesity and diabetes was significantly higher in patients with cryptogenic cirrhosis
- In this current series 4 out of 5 female had associated diabetes and lesser weight loss pointing towards NASH

Conclusion

- The prevalence of cryptogenic cirrhosis among admitted cirrhotic patients in DMCH is 13%.
- The most common cause of cirrhosis among these patients is HBV infection followed by HCV infection which is 55.0% and 17.6% respectively.

Thank You