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Correlation of Sonographic Appearance of Chronic Liver Disease with Serological Findings of Hepatitis B and C in Multan City

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Abstract

Liver cirrhosis is the irrecoverable disease of the liver, finally it causes necrosis of liver cells, as a result, change normal cells into an abnormal knot as well as structural abnormalities occur. It caused by many of reason, but here we discussed only by the hepatitis b virus and hepatitis b virus. The hazard of liver cirrhosis increased day by day. Recently liver cirrhosis prevalence of Pakistan was 13.5%. Sonography can easily diagnose the liver cirrhosis caused by hepatitis b and c virus. Objective: The object of this study to examine the analyses of ultrasonographic diagnosis of liver cirrhosis in patients with chronic viral hepatitis B and C. Method: the cross-sectional study was conducted at Fatima ultrasound center. All age group patients with hepatitis B and C virus liver cirrhosis was included. Scanner GE Logic 5 and 7 Pro, DP-20 used for this study to examine the collaboration of liver cirrhosis. The liver cirrhosis associated hepatitis B virus and hepatitis C virus were analyzed on trans-abdominal by concave prob 2.5- 5MHz. Result: Total 376 patients determine to have hepatitis B and C virus cause liver cirrhosis were incorporate all age patients which a large portion of them was male the absolute level of liver cirrhosis was 46%. Conclusion: We observe that liver cirrhosis associated with hepatitis B and C virus more common in male than female. Rural areas are more effective by liver cirrhosis associated with hepatitis B and C virus.

Keywords: Chronic Liver Disease, Hepatitis

Introduction

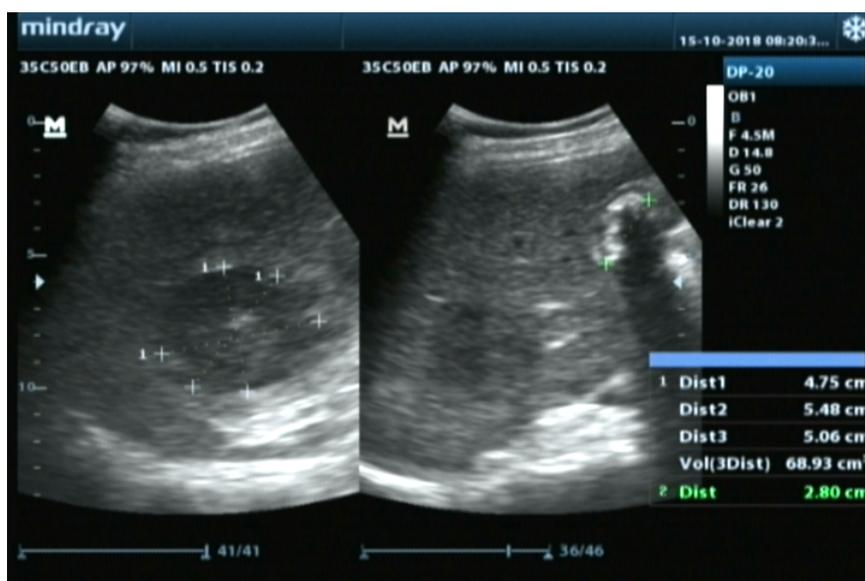
Cirrhosis is a genuine degenerative infection that happens when solid cells in the liver are harmed and supplanted by scar tissue, for the most part, because of incessant hepatitis B and C. As liver cells offer an approach to extreme scar tissue, the organ loses its capacity to work appropriately. Extreme harm can prompt liver disappointment and potential demise. Consistently, (around 31,000 individuals in the U.S.?) pass on from cirrhosis, ceaseless hepatitis B and C. The malady can't be turned around or restored aside from, now and again, through a liver transplant. In any case, it can regularly be impeded or ended, particularly if the sickness is identified in the beginning periods. Despite the fact that capacity can never be reestablished to the pieces of liver that have swung to scar tissue, can carry on with a sound existence with the rest of the segment if the illness is gotten in time. In any case, there is a point of no arrival with cirrhosis. As more cells are supplanted by scar tissue, less solid cells are left to deal with the liver's numerous errands. This is the reason it's vital to recognize the hidden causes at the earliest opportunity and start finding a way to dispose of them. Hepatitis B or C infection intense contamination can prompt recuperation, intense liver disappointment, or perpetual disease. Chronicity of hepatitis B virus and hepatitis C virus disease relies upon the age, sex, and safe ability at the season of contamination. In most immuno-skillful grown-ups, 5% to 10% create perpetual hepatitis B virus disease, while 75% to 85% create interminable hepatitis C virus contamination. Ceaseless contamination may result in a 'solid bearer' state, liver cirrhosis and additionally hepatocellular carcinoma of person who creates intense liver disappointment 80 percent bite the dust within days and weeks after disease.

The sonography conclusion shows Chronic hepatitis fundamentally uncovered diminished splendor and number of entryway vein radicle dividers and overall expanded liver echogenicity. Furthermore, the neurotic seriousness intently paralleled these ultrasound designs.

Method

The cross-sectional study was conducted at Fatima ultrasound center. All age group patients with hepatitis B and C virus liver cirrhosis was included. Our sample size was 376 patients. 376 patients were included after the approval of synopsis from an institutional review board (IRB).

All age patients diagnose liver cirrhosis associated with hepatitis B virus, and hepatitis C virus were included, Scanner used for diagnosis GE logic 5 and 7 pro, DP-20. The liver cirrhosis associated with hepatitis B virus and hepatitis C virus were analyzed on trans-abdominal by concave prob 2.5- 5MHz.



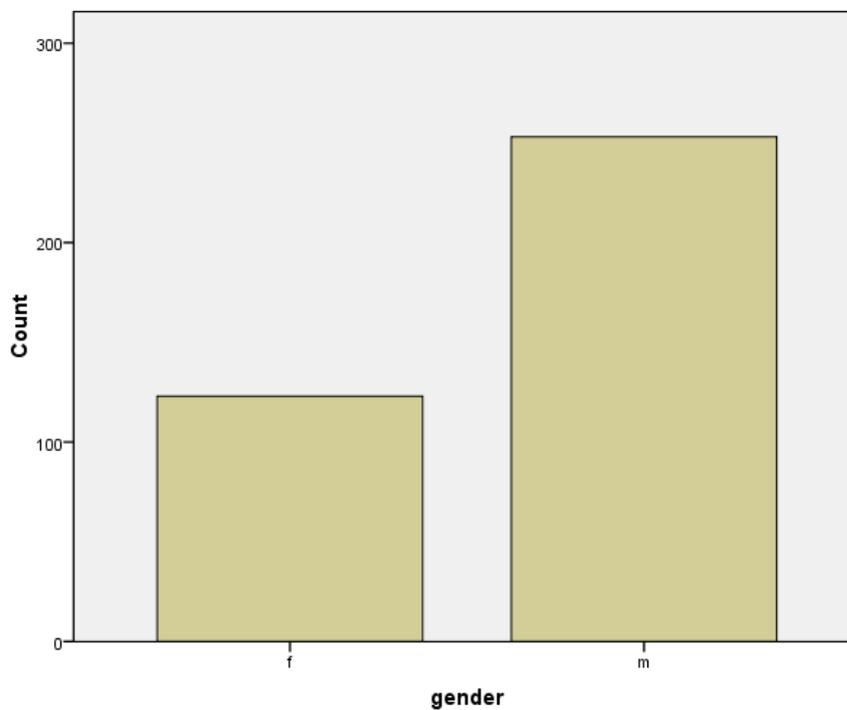


Results

Total patients of 376 included this study. Most of the patients were belong in rural areas. Major patients were 30-70 years old. In this study, both gender were included 123 female (32%) and 253 male (67.3%). Frequencies obtain abdominal ascites (62%), liver cirrhosis (38.3%), liver margin irregular (38.6%), mild irregular (39.4%).

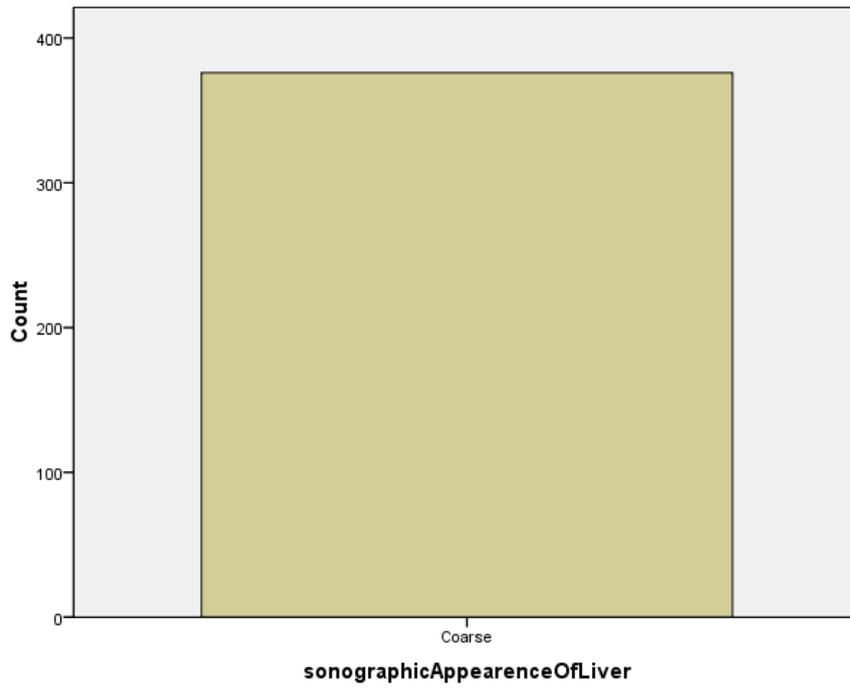
Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid f	123	32.7	32.7	32.7
m	253	67.3	67.3	100.0
Total	376	100.0	100.0	



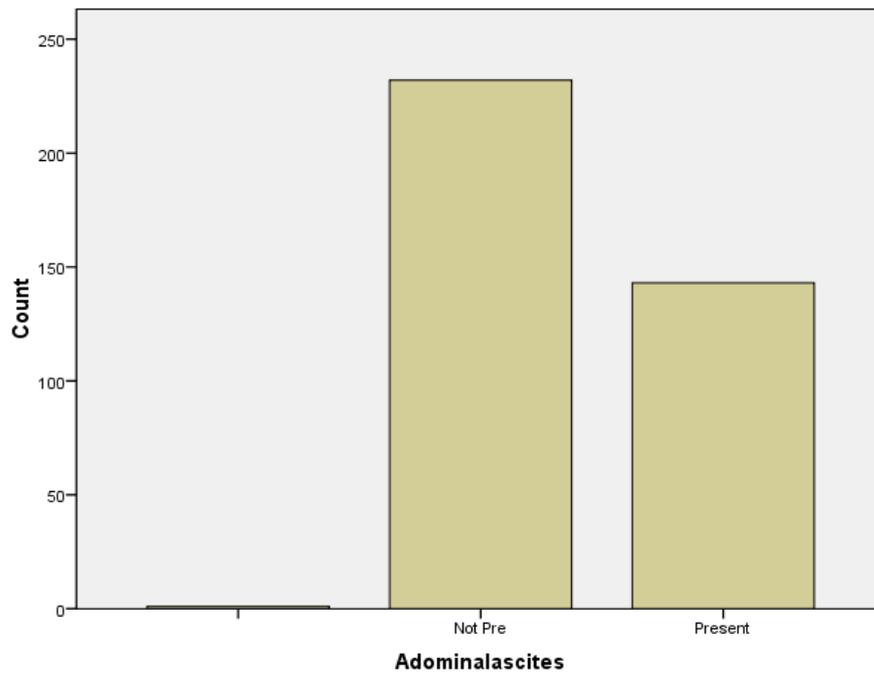
Sonographic Appearance of Liver

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Coarse	376	100.0	100.0	100.0



Abdominal ascites

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Not Pre	232	61.7	61.7	62.0
Present	143	38.0	38.0	100.0
Total	376	100.0	100.0	



Liver cirrhosis

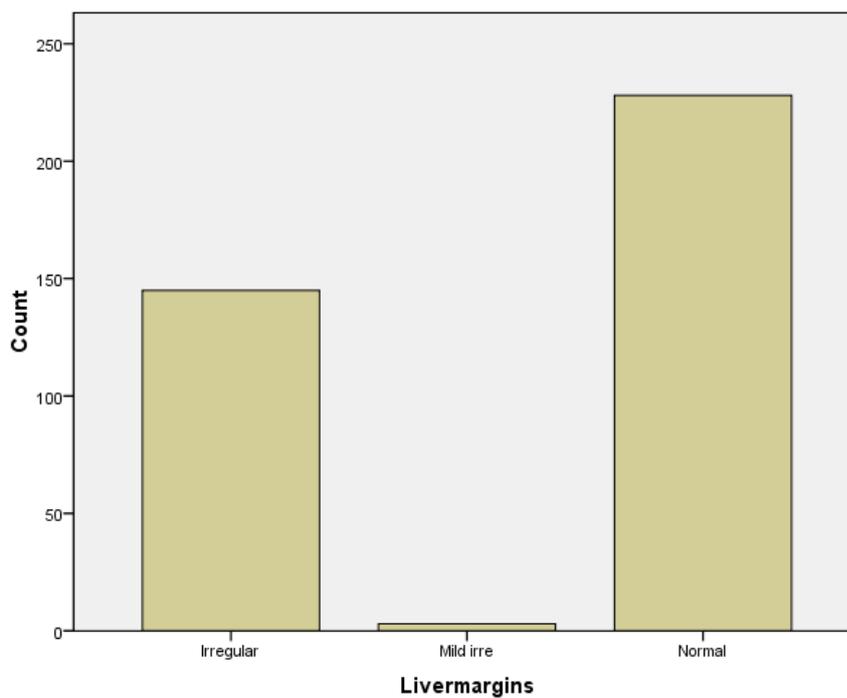
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cirrhosis	144	38.3	38.3	38.3
	Not present	232	61.7	61.7	100.0
	Total	376	100.0	100.0	

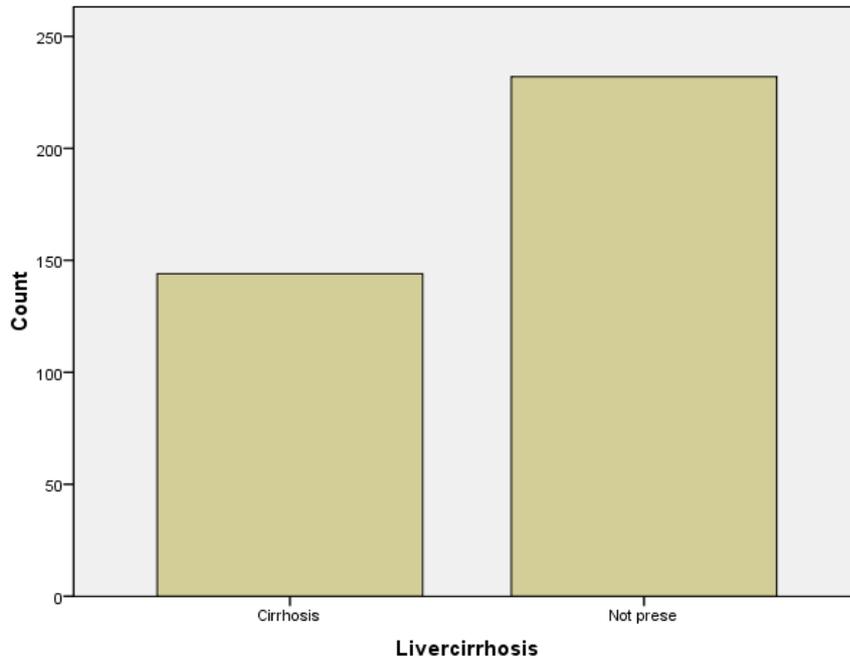
Abdominal ascites

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Pre	232	61.7	61.7	62.0
	Present	143	38.0	38.0	100.0
	Total	376	100.0	100.0	

Liver margins

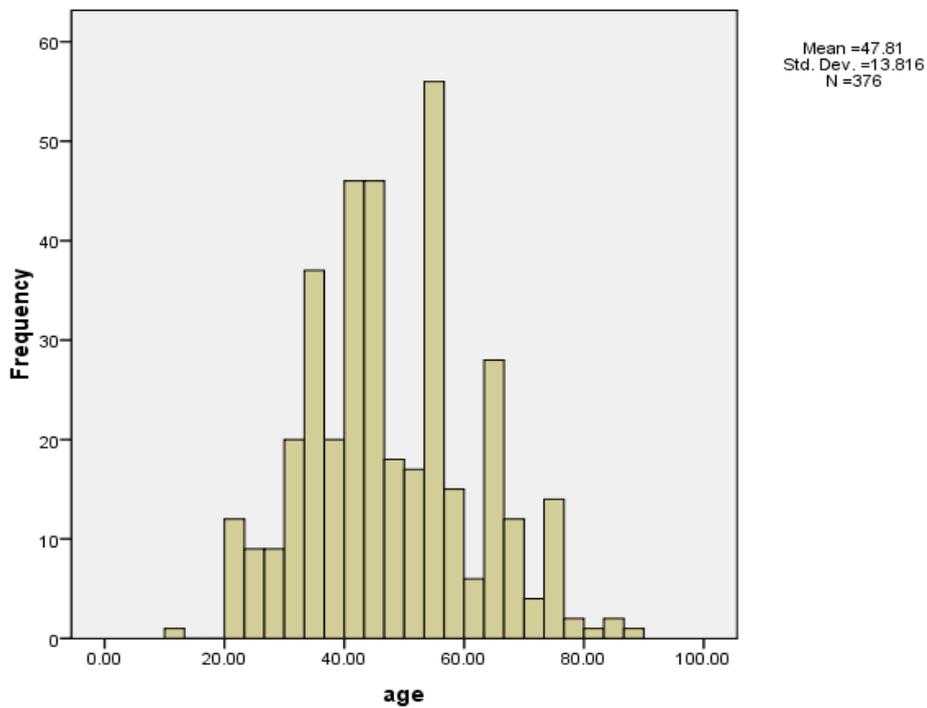
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Irregular	145	38.6	38.6	38.6
	Mild irregular	3	.8	.8	39.4
	Normal	228	60.6	60.6	100.0
	Total	376	100.0	100.0	





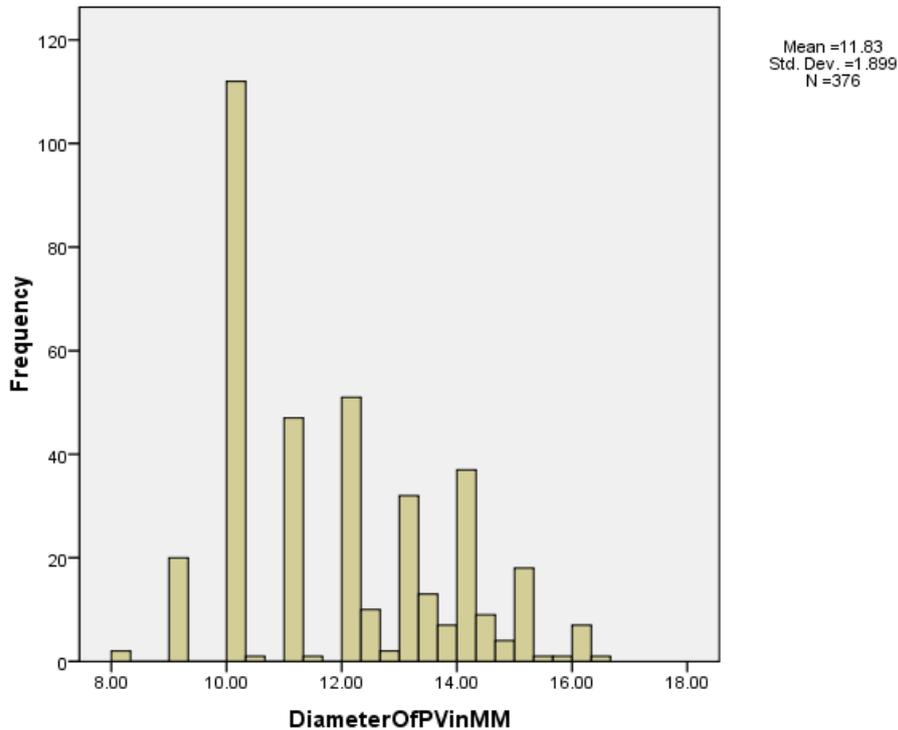
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Age	376	12.00	87.00	47.8138	13.81603
Valid N (listwise)	376				

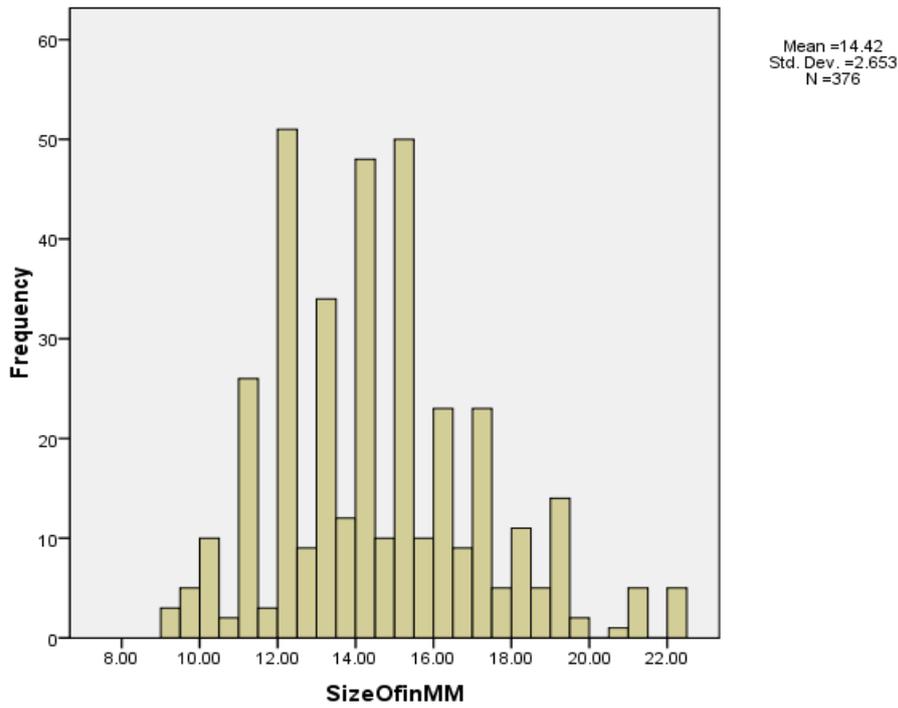


Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
DiameterOfPvinMM	376	8.00	16.50	11.8258	1.89866
Valid N (listwise)	376				

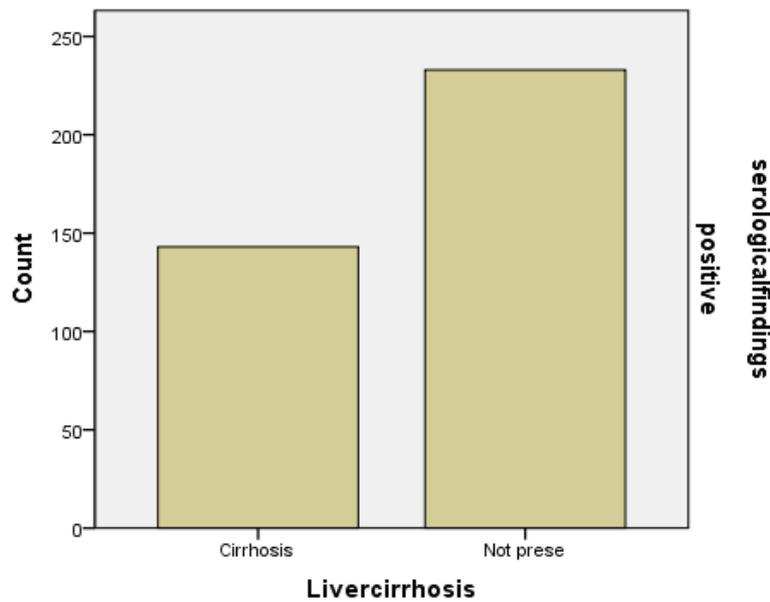
**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
SizeOfinMM	376	9.00	22.10	14.4191	2.65308
Valid N (listwise)	376				



Liver cirrhosis * serological findings Cross tabulation
Count

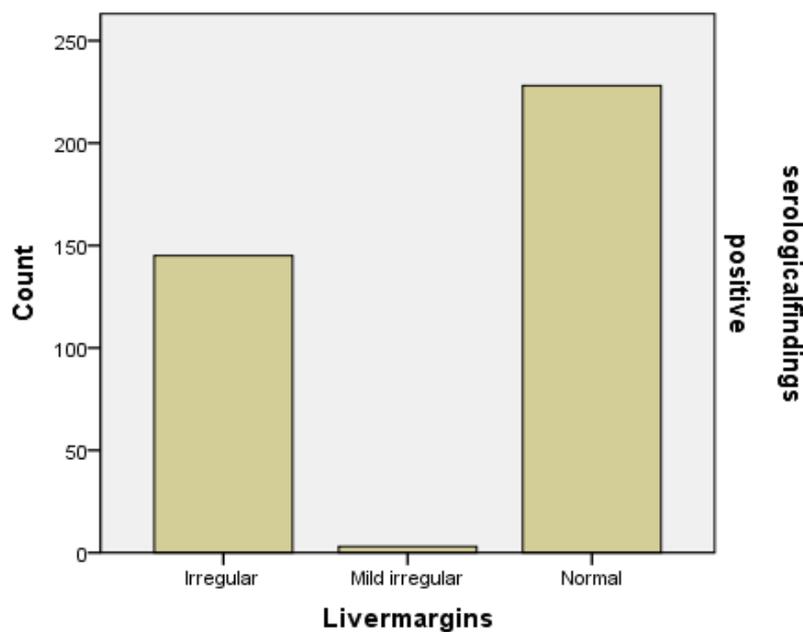
		Serological findings	Total
		Positive	
Livercirrhosis	Cirrhosis	143	143
	Not present	233	233
Total		376	376



Liver margins * serological findings Cross tabulation

Count

		Serological findings	Total
		Positive	
Liver margins	Irregular	145	145
	Mild irregular	3	3
	Normal	228	228
Total		376	376

**Discussion**

Alexandra von herbay MD and Julia westendorff MD performed the study in 2009, examine the 209 patients surfing malignant focal lesions, 107 patients were included hepatocellular carcinoma, 70 patients were metastases, 26 patients were cholangiocellular carcinoma and six others types of malignancy. 108 patients surfing focal lesion, 30 patients were regenerative nodules, 30 patients were hemangiomas, 13 patients had focal nodular hyperplasia, 12 abscesses, 8 necrosis, 7 steatosis areas, and 8 other benign lesions. In the last stage, 91% hypoenhancement as a result malignant lesion, 37% of a benign lesion. In the last stage, 20% hyperenhancement benign lesion, not a malignant lesion. Sonography value of diagnosis in sensitivity 90% ,specificity 99%, and accuracy 89% malignant lesion .

Another study was introduced by Y-F zhang MD, in 2012. He observed hypervascularity was 94.8%, macroregenerative nodules, and 60.0%, high- grade dysplastic nodules during arterial phase on ultrasound. Location rates of normal vascular example (i.e., hypervascularity amid blood vessel stage and ensuring washout) in HCCs with a distance across of <2.0 cm, 2.1-3.0 cm, and 3.1-5.0 cm were 69.2%, 97.1%, and 100.0% individually. Ultrasound altogether improved the affectability [88.8% (103/116) versus 37.1% (43/116), p<0.001] in separating HCCs from non-neoplastic injuries when contrasted and pattern ultrasound. Notwithstanding, the affectability and precision of ultrasound for HCCs <2.0 cm in measurement were altogether lower than those for HCCs of 2.1- 3.0 cm and 3.1-5.0 cm in the distance across.

Another study was introduced by IoanSporea, Alina Martie, Simona Bota in 2014. He detects from 1329 patients, and ultrasound was convincing for a particular pathology in 1102 cases (82.9%). For the separation of

benign/ malignant injury. Ultrasound achieved a definitive analysis in 1196 (90%) cases. The percentage of convincing ultrasound examination was altogether higher in patients without ceaseless liver infection as contrasted and those with unending hepatopathies 87.3% versus 74.4%($p < 0.0001$).

Another study was introduced by Shahid Sarwar, and Anwaar A. Khan in 2017. In this study, 216 patients included, liver cirrhosis was available in 112 (51.9%) patients, and 69(31.9%) were treatment experienced. Liver sickness was decompensated in 37 (17.1%) patients. 206 patients who finished examination convention, 173 (83.1%) accomplished SVR12, 89.2% (25/28) with triple treatment, and 82.2% (148/180) with sofosbuvir/ ribavirin treatment. Treatment reaction was comparative between treatment innocent 86.2% (119/138) and treatment experience 79.4%(54/68) patients (p value 0.9) SVR12 was mediocre in cirrhosis patients 75.4% (80/106) when contrasted with those with no cirrhosis 93%(93/100) (p value < 0.000). It was considerably lesser in those with decompensated liver ailment 68.8% (24/35).

In my study, total patients 376 included this study. Most of the patients were belong in rural areas. Major patients were 30-70 years old. In this study, both gender were included 123 female (32%) and 253 male (67.3%). Frequencies obtain abdominal ascites (62%), liver cirrhosis (38.3%), liver margin irregular (38.6%), mild irregular (39.4%).

Conclusion:

We observe that liver cirrhosis associated with hepatitis B and C virus more common in male than female. Rural areas are more effective by liver cirrhosis associated with hepatitis B and C virus.

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