RESULTS

This study was conducted on thirty patients who attended the internal medicine and hepatology clinics, in EL SAHEL TEACHING HOSPITAL.

They were selected to have portal hypertension of different etiologies.The results of this study will be presented as follows:

- Descriptive data of the studied patients and controls
- Comparison of this collected data and findings among different patients which were classified into different subgroups according to presence or absence of history of gastrointestinal haemorrhage,patients were classified into bleeders and non-bleeders.

I. DESCRIPTIVE DATA:

All the patients were suffering from portal hypertension of different aetiologies and of different age groups. Seventeen out of thirty patients were males (representing 56.6% patients) while thirteen were females (representing 43.4% patients).Sixteen healthy persons with no history or clinical findings of liver disease or portal hypertension represented the control group. Nine of them were males (56.3 %) while seven were females (43.7%).

Sex	Group			
	Patients		Controls	
	Number	Percent	Number	Percent
Male	17	56.6	9	56.3
Female	13	43.4	7	43.7
Total	30	100%	16	100%

Table (1): Sex distribution among patients and controls

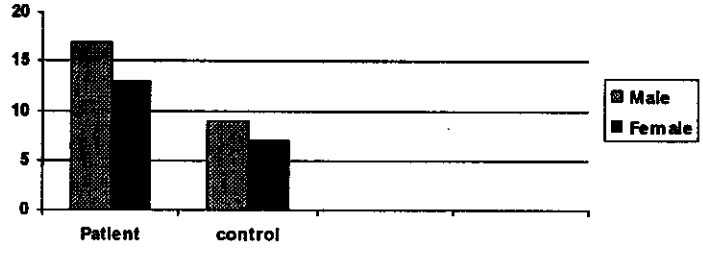

Fig (13): Sex distribution of the patients and control groups.

Table (1) and Fig(13) show the mean sex distribution of both patients and control group.

	Number	Percent
Bleeders	24	80%
Non bleeders	6	20%
Total	30	100%

Table (2): Distribution of the patients group according to the history of gastro-intestinal bleeding

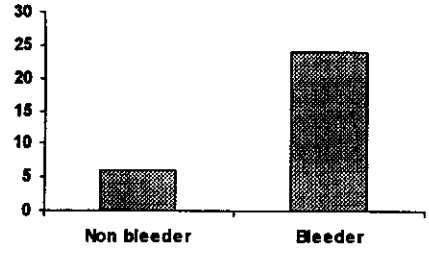

Fig (14): prevalence of history of bleeding varices and sclerotherapy.

Table (2) and Fig(14) show that 6 (20%) patients out of 30 patients had no history of previous gastro-intestinal bleeding, while 24 (80%) patients had at least 1 attack of gastro-intestinal bleeding.

Findings		No	%
Liver size	Shrunken	5	17%
	Average	8	27%
	Hepatomegaly	17	56%
Spleen	Normal size	6	20%
	Splenomegaly	24	80%
Ascites	No ascites	24	80%
	Ascites	6	20%
Collaterals	No collaterals	18	60%
	Present	12	40%

Table (3): Sonographic findings of the studied patients .

Table (3) shows the frequency of diffirent sonographic findings in the patients group. The presence of collaterals was confirmed by color Doppler sonography.

	Patients		Controls	
	Mean (cm)	± SD	Mean (cm)	± SD
Liver span	16.96	2.73	12.31	2.5
Splenic size	13.92	3.02	8.31	1.53
PV diameter	1.41	0.3	0.86	0.13

Table (4): The mean values of liver, splenic sizes as well as the portal vein diameters of the patients and controls

Assessment of liver, splenic size and portal vein diameter showed statistically significant difference between patients and controls being larger in the patient groups.

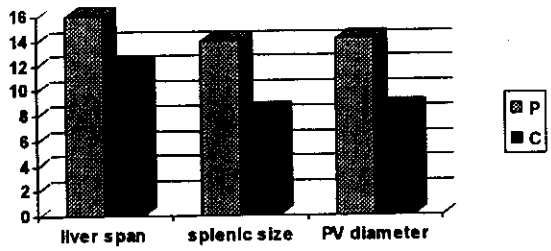

Fig (15): Mean values of liver and splenic size and PV diameter of patients and controls

	Patients		Controls	
	Mean	SD	Mean	SD
PV mean velocity (cm/sec)	10.72	4.9	20.62	4.8
PV flow volume (ml/min)	417.6	3.19	850.1	286.4

Table (5): Doppler portal hemodynamic values of patients and controls

- As regard the direction of blood flow within the portal vein, two patients (6%) had hepatofugal flow direction, three (10%) patients had bidirectional flow pattern, while the majority twenty five showed hepatopetal flow pattern within the portal vein.
- Statistically significant difference was detected between patients and controls regarding portal vein velocity, portal vein flow volume and congestion index.

Assessment of oesophageal varices	No	%
No varices	2	8%
Grade I & II (small)	20	84%
Grade III & IV (large)	2	17%

Table (6): Upper endoscopic findings in the studied patients

Upper GI endoscopic examination of the patients revealed two (8 %) of them had no varices, while twenty (84 %) had small sized varices. Only two (8 %) patients were found to have large varices.

II. ASSESSMENT OF DIFFERENCES AMONG STUDIED GROUPS:

According to the history of bleeding

Patients were classified into bleedrs and non-bleeders according to the presence or absence of gastrointestinal hemorrhage.

	Non-bleeders Mean ± SD	Bleeders Mean±SD
Liver span (in cm)	16.3±2.4	15.6±2.6
Splenic size (in cm)	12.8±3.4	14.9±2.2
PV diameter (in mm)	11.6±2.5	14.1±2.7

Table (7): The mean values of liver, spleen sizes, as well as the portal vein diameters among bleeders and non-bleeders.

Regarding the splenic size, there was statistically significant difference between bleeders and non-bleeders groups. The mean splenic size in the bleeder group was significantly larger, having a mean of 14.9+2.2 cm compared to non-bleeders group, where the spleen had a mean of 12.8+3.4cm. No statistically significant difference was detected regarding liver size between bleeders and non-bleeders groups. Portal vein diameter is more among bleeders.

	Non bleeders		bleeders	
	Mean	±SD	Mean	±SD
PV mean velocity (cm /sec)	10.4	±4.9	10.5	±4.8
PV volume flow (ml/min)	419	±348	407	±290

Table (8): Doppler portal hemodynamic values of the bleeders and non bleeders.

No statistically significant difference was detected regarding the different portal vein haemodynamic between bleeders and non-bleeders groups.