Results

This study included 120 chronic hepatitis C patients. They all had hepatitis C virus antibodies positive and PCR for HCV RNA positive. They were divided into two groups, namely control group and study group.

Control group:

This group included 20 patients who did not receive any antiviral therapy.

Study group:

This group included 100 patients who received PegInterferon injections once a week, plus 800-1200mg of ribavirin daily, for 48th weeks. All patients in this group were negative for HBsAg and antinuclear antibodies.

Table (8):

Shows history of risk factors in all patients subgroups, regarding the risk factors in study group: history of schistosomiasis and its parenteral treatment was present in 53 (53%) patients while 19 (19%) patients had surgical operations, 11 (11%) patients had blood transfusion, and 21 (21%) patients had undergone dental procedures. There were 4 patients had more than one risk factor. The corresponding the risk factors in control group: history of schistosomiasis and its parenteral treatment was present in 9 (45%) patients while 3 (15%) patients had surgical operations, 2 (10%) patients had blood transfusion, and 4 (20%) patients had undergone dental procedures. There were 2 patients had no one risk factor.

We will show the descriptive statistics for patients in the study group (100n) in comparison with control group (20n) as the following:-

Pretreatment total billirubin: see table (9)

It varied from 0.32 to 2.3 mg/dl (mean 0.792 ± 0.353) with P value=0.042 in study group while in control group it varied from 0.31 to 2.3 mg/dl (mean 0.804 ± 0.520).

Follow up of treatment: see Table (10, 11, 12, 13)

In 100 patients, the mean total billirubin after 12 weeks varied from 0.3 to 2 mg/dl (mean .873 ± .340) with P value=0.033, mean total billirubin after 24 weeks varied from 0.19 to 2.7 mg/dl (mean .931 ± .394) with P value=0.038, mean total billirubin after 36 weeks varied from 0.22 to 1.84 mg/dl (mean .874 ± .312) with P value=0.030, mean total billirubin after 48 weeks varied from 0.3 to 2 mg/dl (mean .894 ± .344) with P value=0.026.

Pretreatment Albumin: see Table (9)

It varied between 3.2 to 5 g/dL (mean 4.62 ± 0.308) with P value=0.954 in study group while in control group it varied from 3.7 to 4.9 g/dL (mean 4.62 ± 0.324).

Pretreatment Alkaline Phosphatase: see Table (9)

It varied between 37 to 129 IU/L (mean 75.5 ± 29.9) with P value=0.050 in study group while in control group it varied between 40 to 129 IU/L (mean 71.38 ± 35.7).

Pretreatment AST: see Table (9)

It varied from 11 to 268 IU/L (mean 56.86 ± 42.7) with P value=0.049 in study group while in control group it varied between 19 to 64 IU/L (mean 40.94 ± 16.3).

Follow up of treatment: see Table (10, 11, 12, 13)

In 100 patients, the mean AST after 12 weeks varied from 5 to 195 IU/L (mean 31.68 ± 32.6) with P value=0.004, mean AST after 24 weeks varied from 6 to 181 IU/L (mean 27.5 ± 25.4) with P value=0.002, mean AST after 36 weeks varied from 7 to 176 IU/L (mean 25.30 ± 30.72) with P value=0.014, mean AST after 48 weeks varied from 8 to 187 IU/L (mean 25.36 ± 30.75) with P value=0.019.

Pretreatment ALT: see Table (9)

It varied from 10 to 434 IU/L (mean 84.48 ± 39.6) with P value=0.002 in study group while in control group it varied between 16 to 104 IU/L (mean 49.22 ± 25.9).

Follow up of treatment: see Table (10, 11, 12, 13)

In 100 patients, the mean ALT after 12 weeks varied from 3 to 200 IU/L (mean 29.07 ± 28.7) with P value=0.044, mean ALT after 24 weeks varied from 4 to 194 IU/L (mean 26.75 ± 25.3) with P value=0.008, mean ALT after 36 weeks varied from 4 to 172 IU/L (mean 24.59 ± 25.65) with P value=0.011, mean ALT after 48 weeks varied from 5 to 178 IU/L (mean 25.63 ± 25.82) with P value=0.011.

Pretreatment PCR of HCV-RNA: see Table (14)

It varied from 14167 to 3.3(10)6 (mean 356071.6 ± 568474.9) with P value=0.047 in study group while in control group it varied between 1.1(10)4 to 1.8(10)6 (mean 388050 ± 493175).

Pretreatment WBC: see Table (15)

It varied between $2.27(10)^3$ to $14.62(10)^3$ (mean $6.8461(10)^3 \pm 2.3756(10)^3$) with P value=0.041 in study group while in control group it varied between $3.74(10)^3$ to $16.8(10)^3$ (mean $7.265(10)^3 \pm 2.8084(10)^3$).

Follow up of treatment: see Table (16, 17, 18, 19)

In 100 patients, the mean WBC after 12 weeks varied from $1.9(10)^3$ to $6.4(10)^3$ (mean $4.0385(10)^3 \pm 1.3831(10)^3$) with P value=0.040, mean WBC after 24 weeks varied from $1.85(10)^3$ to $5.86(10)^3$ (mean $3.7710(10)^3 \pm 1.0851(10)^3$) with P value=0.039, mean WBC after 36 weeks varied from $1.8(10)^3$ to $5.6(10)^3$ (mean $3.5574(10)^3 \pm 1.1405(10)^3$) with P value=0.806, mean WBC after 48 weeks varied from $1.86(10)^3$ to $5.56(10)^3$ (mean $3.6974(10)^3 \pm 1.1215(10)^3$) with P value=0.708.

Pretreatment platelets: see Table (15)

It varied from 65,000 to 324,000 per µl (microlitre) of blood (mean 193.6 ± 64.3) with P value=0.043 in study group while in control group it varied from 135,000 to 327,000 per µl (microlitre) of blood (mean 215.5 ± 59.8).

Follow up of treatment: see Table (16, 17, 18, 19)

In 100 patients, the mean platelets after 12 weeks varied from 22,000 to 366,000 per µl (microlitre) of blood (mean 180.8 ± 195.4) with P value=0.028, mean platelets after 24 weeks varied from 48,000 to 246,000 per µl (microlitre) of blood (mean 234.90 ± 775.64) with P value=0.008, mean platelets after 36 weeks varied from 45,000 to 400,000 per µl (microlitre) of blood (mean 151.6 ± 63.2) with P value=0.003, mean platelets after 48 weeks varied from 55,000 to 325,000 per µl (microlitre) of blood (mean 157.6 ± 91.9) with P value=0.004.

Pretreatment Hb%: see Table (15)

It varied from 8.8 to 17.3 g/dL (mean 14.2 ± 2.48) with P value=0.836 in study group while in control group it varied between 10.3 to 16.2 g/dL (mean 14.1 ± 2.48).

Follow up of treatment: see Table (16, 17, 18, 19)

In 100 patients, the mean Hb after 12 weeks varied from 8.2 to 15.5 g/dL (mean 11.97 ± 1.48) with P value=0.083, mean Hb after 24 weeks varied from 8.2 to 15.9 g/dL (mean 11.6 ± 1.38) with P value=0.325, mean Hb after 36 weeks varied from 7.8 to 13.8 g/dL (mean 11.2 ± 1.27) with P value=0.726, mean Hb after 48 weeks varied from 9.2 to 14.3 g/dL (mean 12.6 ± 1.83) with P value=0.630.

Follow up of treatment: see Table (20, 21)

In 100 patients, the complete ophthalmological examinations done for all patients every 12 weeks so they revealed that there was asymptomatic unilateral interferon retinopathy (cottonwool spots) in one

patient after a 12-17 weeks, with P value= 0.039, then another patient developed asymptomatic unilateral interferon retinopathy (cottonwool spots) after a 24-28 weeks, with P value= 0.039. The retinopathy disappeared in the first patient after 5 weeks of discontinuation of antiviral treatment and disappeared in the other patient after 4 weeks of discontinuation of antiviral treatment and did not recur in any patient after the IFN-induced retinopathy resolved.

Table (8): History of risk factors in all patients (study and control groups).

History	Study group (100n)		Control group (20n)	
1) Schistosomiasis	53n	53%	9n	45%
2) Blood transfusion	11n	11%	2	10%
3) Dental procedures	21n	21%	4	20%
4) Surgical operations	19n	19%	3	15%

Table (9): Pretreatment descriptive statistics of liver function tests for all patients in study group (100n) in comparison with control group (20n).

		Mean ± SD	t. test	p. value
Alb-Sc	study	4.62 ± .308	**0.058**	**0.954**
	control	4.62 ± .324		
AlkPh-Sc	study	75.5 ± 29.9	**1.635**	**0.050**
	control	71.38 ± 35.7		
AST-Sc	study	56.86 ± 42.7	**1.636**	**0.049**
	control	40.94 ± 16.3		
ALT-Sc	study	84.48 ± 39.6	**2.147**	**0.002**
	control	49.22 ± 25.9		
T.Bil-Sc	study	.792 ± .353	**1.996**	**0.042**
	control	.804 ± .520		

Table (10): Follow up of liver function tests through treatment of all patients in study group (100n) in comparison with control group (20n) at 12th week.

		Mean ± SD	t. test	p. value
ALT-W12	study	29.07 ± 28.7	**3.635**	**0.044**
	control	41.63 + 18.63		
AST-W12	study	31.68 ± 32.6	**6.325**	**0.004**
	control	50.63 + 14.63		
T.Bil-W12	study	.873 ± .340	**1.928**	**0.047**
	control	.996 ± 0.426		

Table (11): Follow up of liver function tests through treatment of all patients in study group (100n) in comparison with control group (20n) at 24th week.

		Mean ± SD	t. test	p. value
ALT-W24	study	26.75 ± 25.3	**3.526**	**0.008**
	control	41.98 + 16.96		
AST-W24	study	27.5 ± 25.4	**4.632**	**0.002**
	control	50.97 + 20.63		
T.Bil-W24	study	.931 ± .394	**1.582**	**0.063**
	control	0.998 ± 0.458		

Table (12): Follow up of liver function tests through treatment of all patients in study group (100n) in comparison with control group (20n) at 36th week.

		Mean ± SD	t. test	p. value
ALT-W36	study	24.59 ± 25.65	**4.325**	**0.011**
	control	41.99 + 13.58		
AST-W36	study	25.30 ± 30.72	**3.635**	**0.014**
	control	50.98 + 25.10		
T.Bil-W36	study	.874 ± .312	**2.947**	**0.018**
	control	1.01 ± .354		

Table (13): Follow up of liver function tests through treatment of all patients in study group (100n) in comparison with control group (20n) at 48th week.

		Mean ± SD	t. test	p. value
ALT-W48	study	25.63 ± 25.82	**5.325**	**0.011**
	control	42.51 + 23.37		
AST-W48	study	25.36 ± 30.75	**3.635**	**0.019**
	control	50.99 + 28.83		
T.Bil-W48	study	.894 + .344	**1.998**	**0.021**
	control	1.03 + .358		

Table (14): Pretreatment descriptive statistics of HCV-RNA levels for all patients in study group (100n) in comparison with control group (20n).

		Mean ± SD	t. test	p. value
HCV-RNA-Sc	study	356071.6 ± 568474.9	**2.639**	**0.047**
	control	388050 ± 493175		

Table (15): Pretreatment descriptive statistics of CBC for all patients in study group (100n) in comparison with control group (20n).

		Mean ± SD	t. test	p. value
WBC-Sc	study	6846.1 ± 2375.6	**3.253**	**0.041**
	control	7265 ± 2808.4		
Hb-Sc	study	14.2 ± 2.48	**0.207**	**0.836**
	control	14.1 ± 1.60		
Plt-Sc	study	193.6 ± 64.3	**1.966**	**0.043**
	control	215.5 ± 59.8		

Table (16): Follow up of CBC through treatment of all patients in study group (100n) in comparison with control group (20n) at 12th week.

		Mean ± SD	t. test	p. value
WBC-W12	study	4038.5 ± 1383.1	**1.687**	**0.040**
	control	4094 ± 1474.3		
Hb-W12	study	11.97 ± 1.48	**1.632**	**0.083**
	control	11.3 ± 1.33		
Plt-W12	study	180.8 ± 195.4	**3.625**	**0.028**
	control	167.5 ± 39.76		

Table (17): Follow up of CBC through treatment of all patients in study group (100n) in comparison with control group (20n) at 24th week.

		Mean ± SD	t. test	p. value
WBC-W24	study	3771.07 ± 1085.1	**2.639**	**0.039**
	control	4162.7 ± 1678.4		
Hb-W24	study	11.60 ± 1.38	**0.988**	**0.325**
	control	11.25 ± 1.403		
Plt-W24	study	234.90 ± 775.64	**4.526**	**0.008**
	control	183.6 ± 60.38		

Table (18): Follow up of CBC through treatment of all patients in study group (100n) in comparison with control group (20n) at 36th week.

		Mean ± SD	t. test	p. value
WBC-W36	study	3557.4 ± 1140.5	**2.654**	**0.027**
	control	3690 ± 1550.2		
Hb-W36	study	11.2 ± 1.27	**0.352**	**0.726**
	control	11.1 ± 1.17		
Plt-W36	study	151.6 ± 63.2	**3.658**	**0.003**
	control	193.3 ± 53.7		

Table (19): Follow up of CBC through treatment of all patients in study group (100n) in comparison with control group (20n) at 48th week.

		Mean ± SD	t. test	p. value
WBC-W48	study	3697.4 ± 1121.5	**0.375**	**0.708**
	control	3642 ± 152.2		
Hb-W48	study	12.6 ± 1.83	**0.347**	**0.630**
	control	11.63 ± 1.74		
Plt-W48	study	157.6 ± 91.9	**2.880**	**0.004**
	control	190.3 ± 58.7		

Table (20): Follow up of complete ophthalmological examinations through treatment of all patients in study group (100n) in comparison with control group (20n) at 12^{th} week.

			Fundus 12		
			+ve	**-ve**	**Total**
Study		N	1	99	100
		%	1	99	100
Control		N	0	20	20
		%	0	100	100
Total		N	1	119	120
		%	0.8	99.2	100
Chi-Square	X^2		4.528		
	P-value		0.039		

Table (21): Follow up of complete ophthalmological examinations through treatment of all patients in study group (100n) in comparison with control group (20n) at 24^{th} week.

			Fundus 24		
			+ve	**-ve**	**Total**
Study		N	1	99	100
		%	1	99	100
Control		N	0	20	20
		%	0	100	100
Total		N	1	119	120
		%	0.8	99.2	100
Chi-Square	X^2		4.528		
	P-value		0.039		

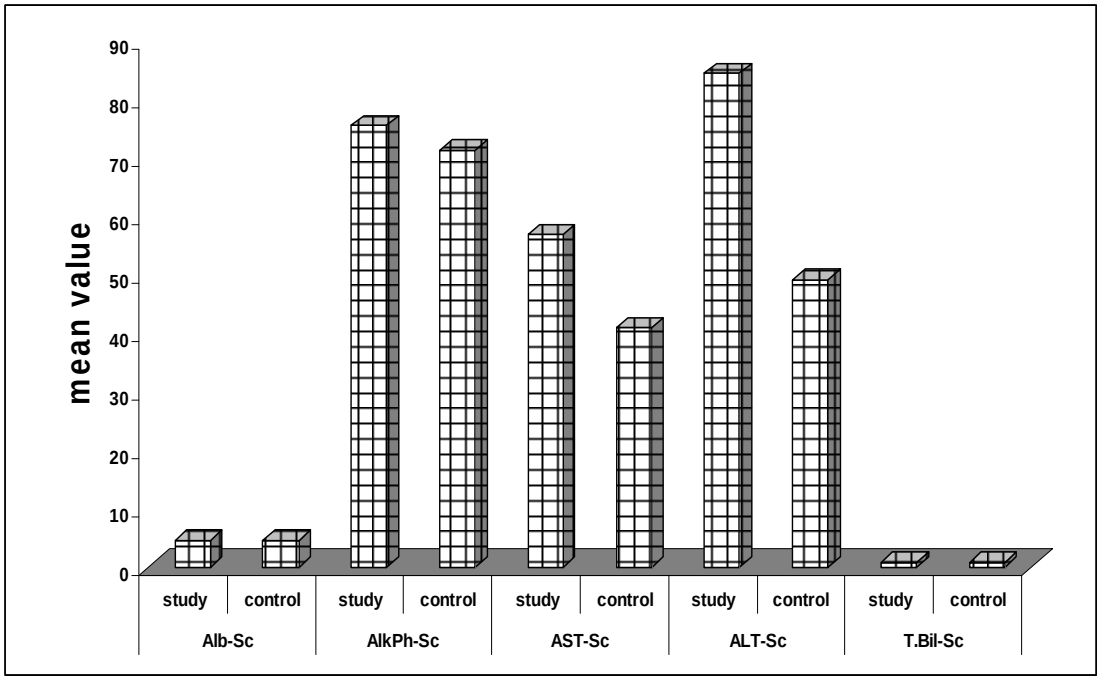

Fig. (10): Chart of pretreatment liver function tests in study group (100n) versus control group (20n).

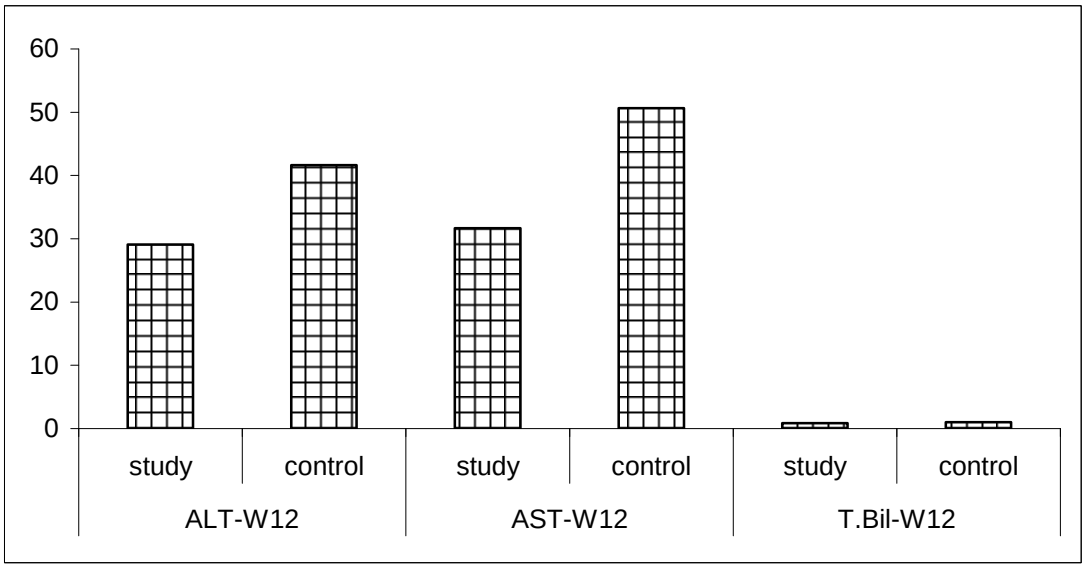

Fig. (11): Chart of liver function tests in study group (100n) versus control group (20n) thorough out treatment at 12^{th} week.

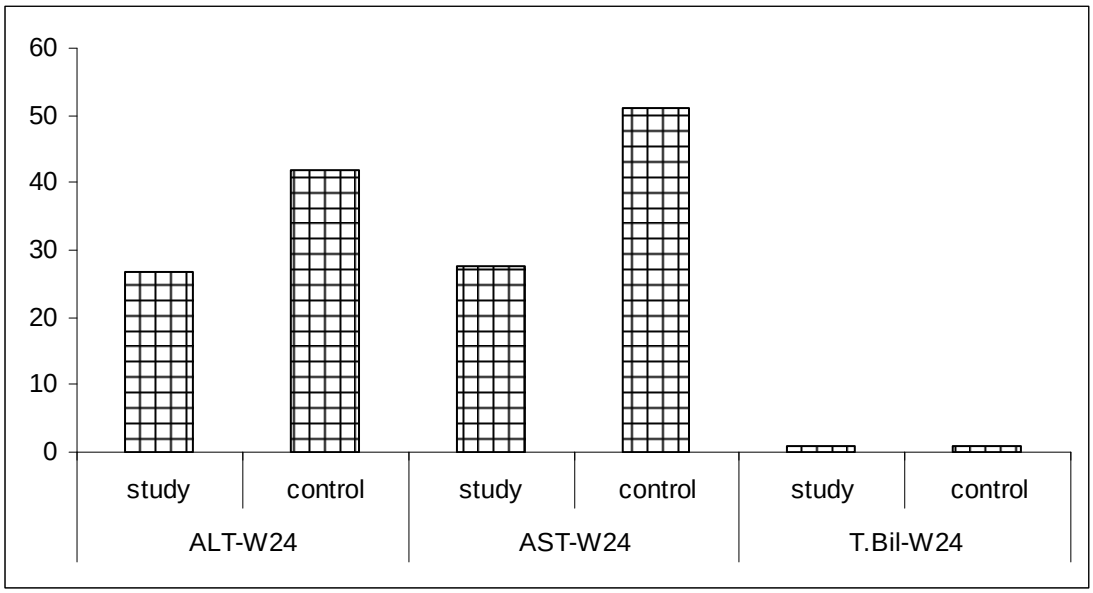

Fig. (12): Chart of liver function tests in study group (100n) versus control group (20n) thorough out treatment at 24th week.

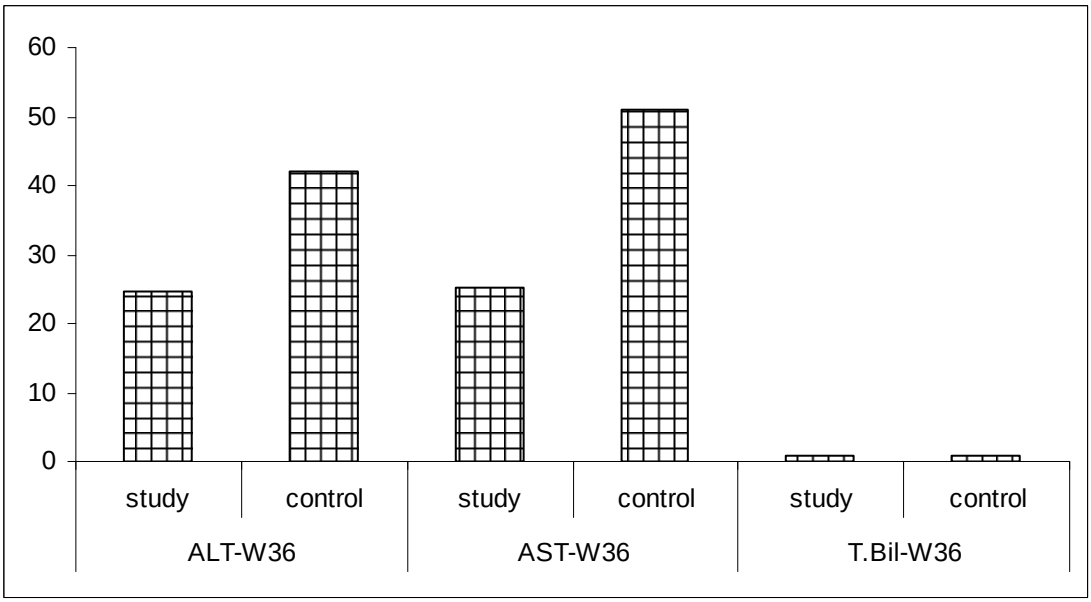

Fig. (13): Chart of liver function tests in study group (100n) versus control group (20n) thorough out treatment at 36th week.

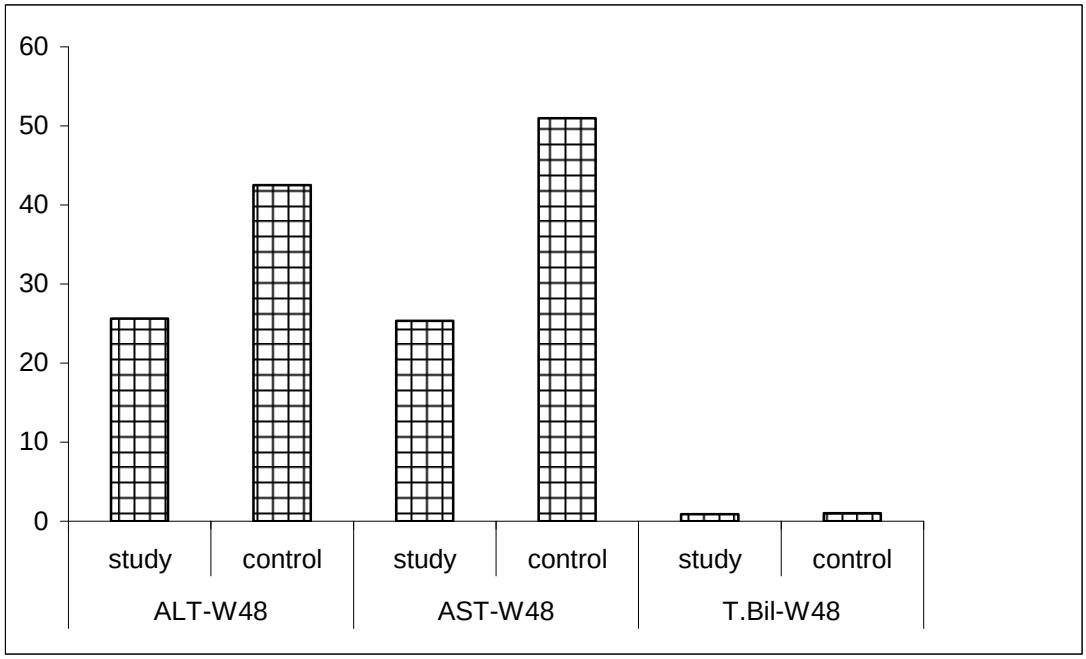

Fig. (14): Chart of liver function tests in study group (100n) versus control group (20n) thorough out treatment at 48th week.

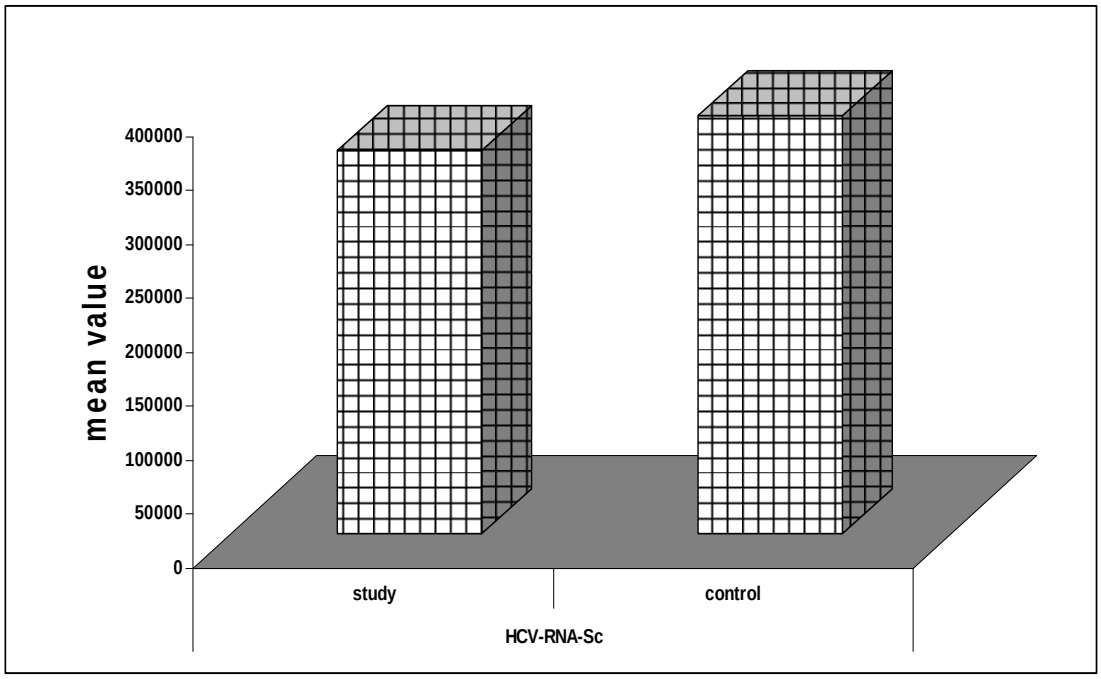

Fig. (15): Chart of pretreatment HCV-RNA levels in study group (100n) versus control group (20n).

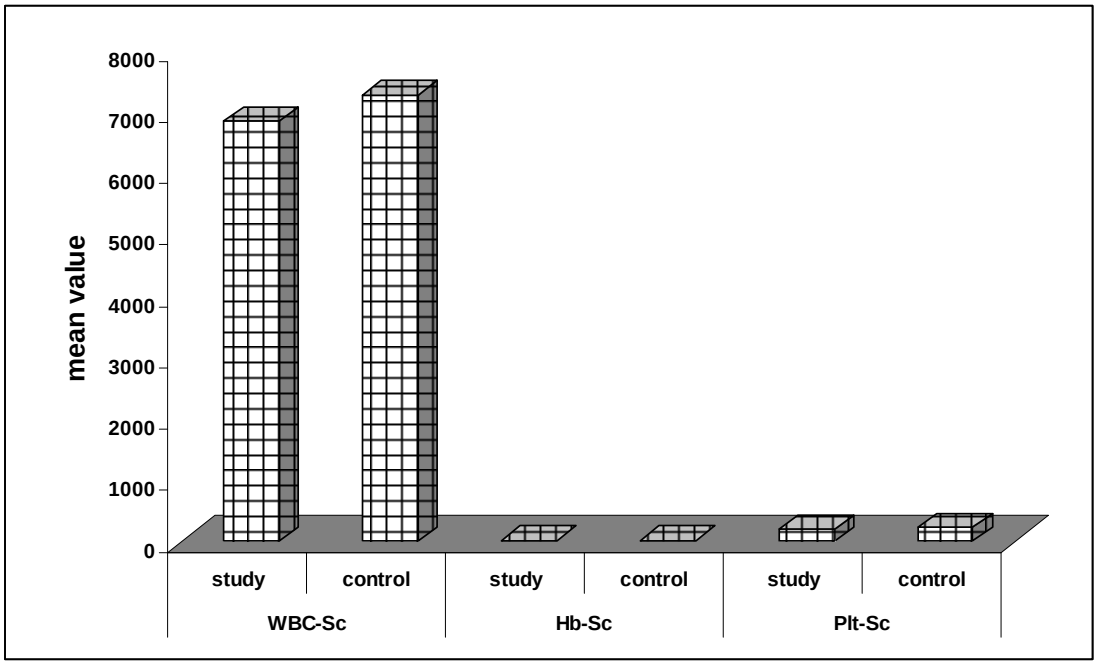

Fig. (16): Chart of pretreatment CBC in study group (100n) versus control group (20n).

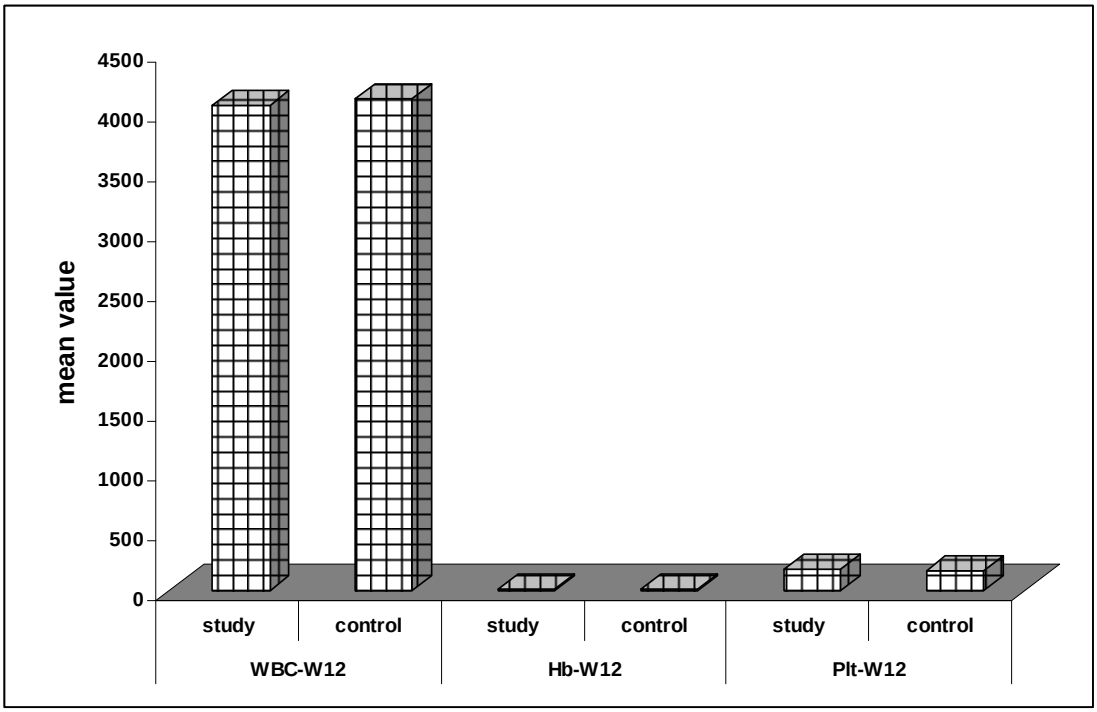

Fig. (17): Chart of CBC in study group (100n) versus control group (20n) thorough out treatment at 12^{th} week.

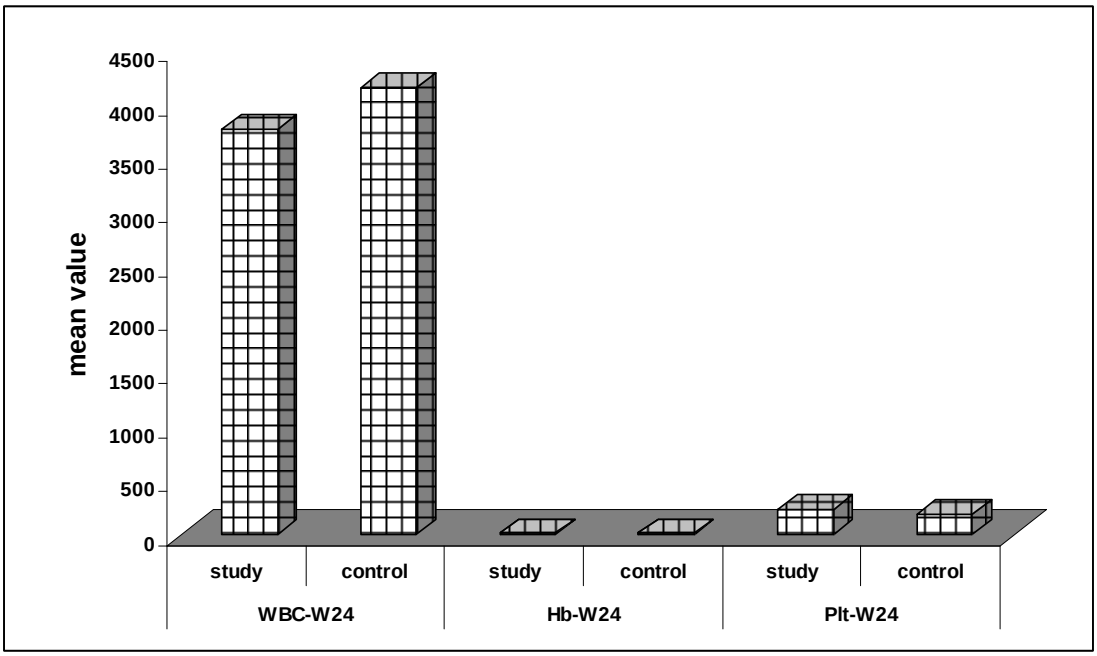

Fig. (18): Chart of CBC in study group (100n) versus control group (20n) thorough out treatment at 24th week.

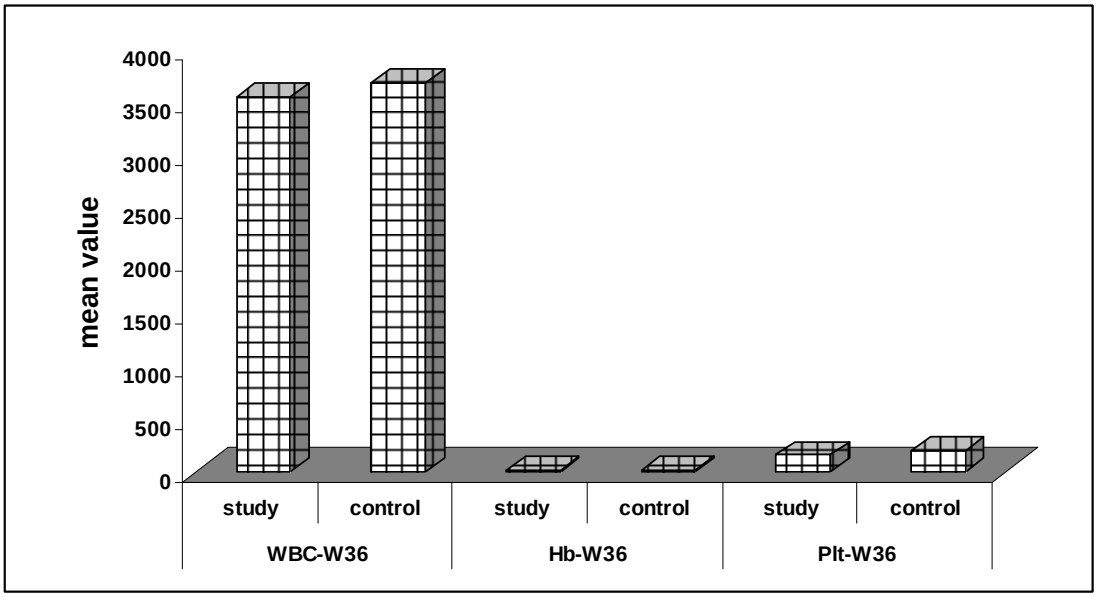

Fig. (19): Chart of CBC in study group (100n) versus control group (20n) thorough out treatment at 36th week.

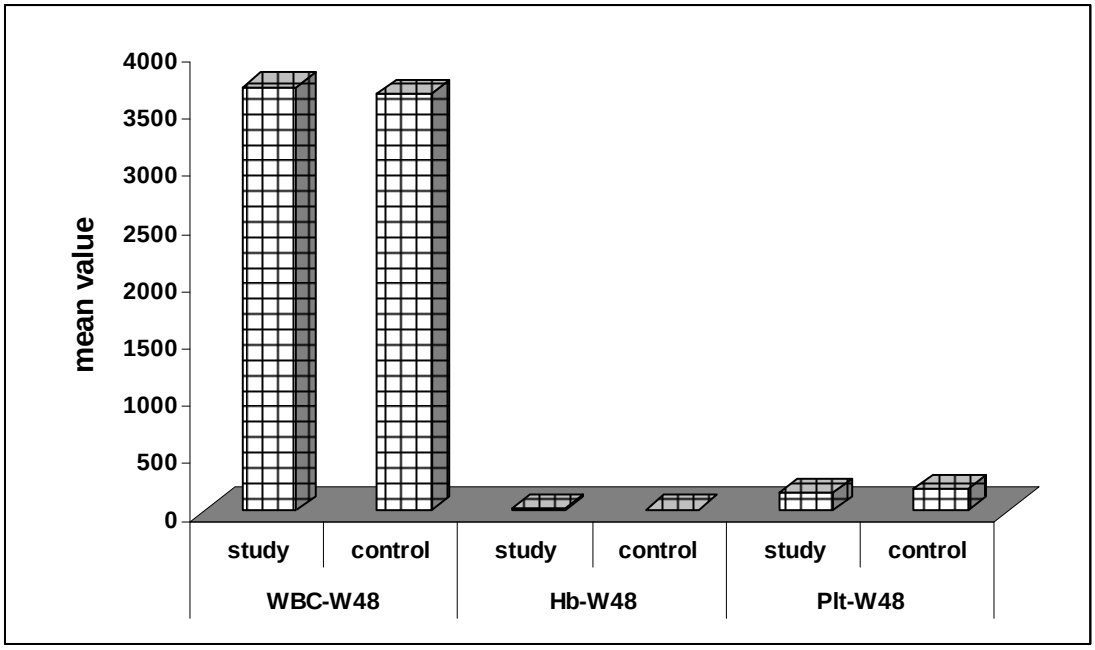

Fig. (20): Chart of CBC in study group (100n) versus control group (20n) thorough out treatment at 48th week.

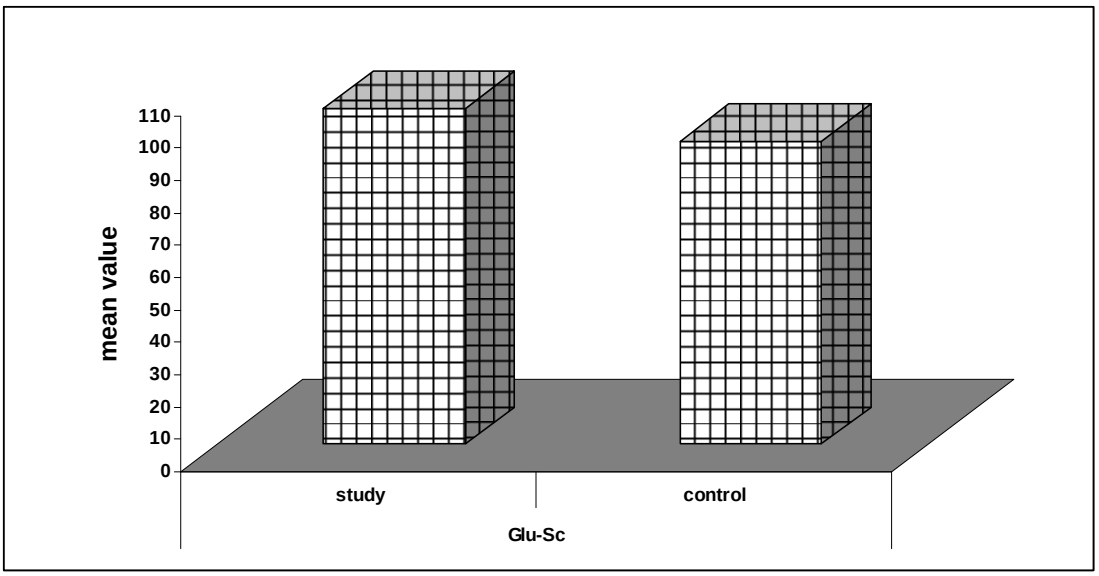

Fig. (21): Chart of pretreatment blood glucose levels in study group (100n) versus control group (20n).

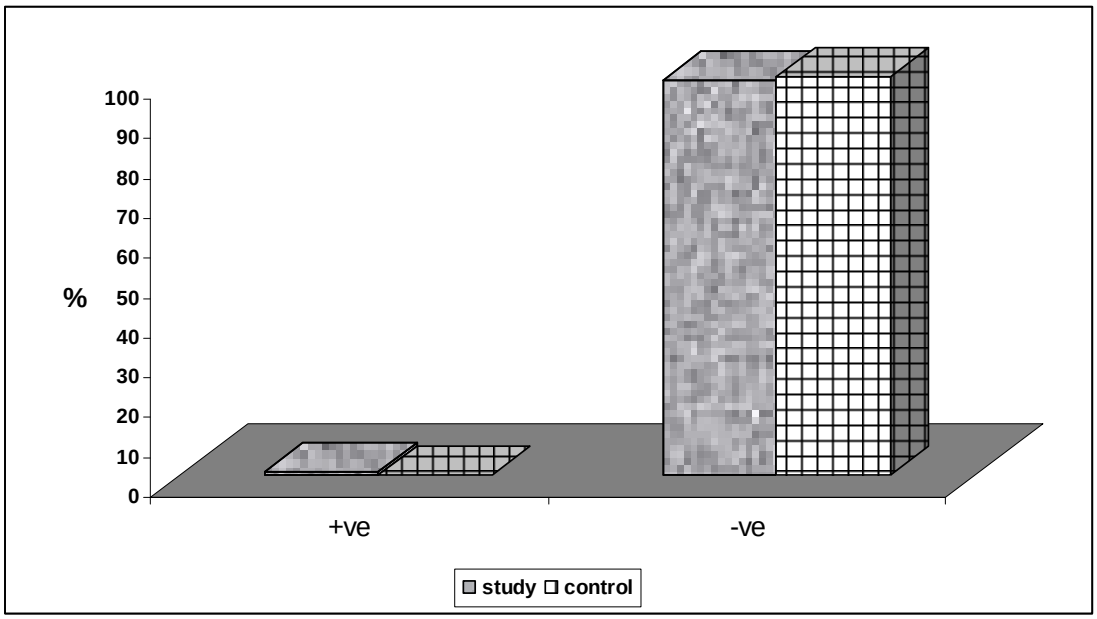

Fig. (22): Chart of abnormal ophthalmological examinations in study group (100n) versus control group (20n) at 12th week.

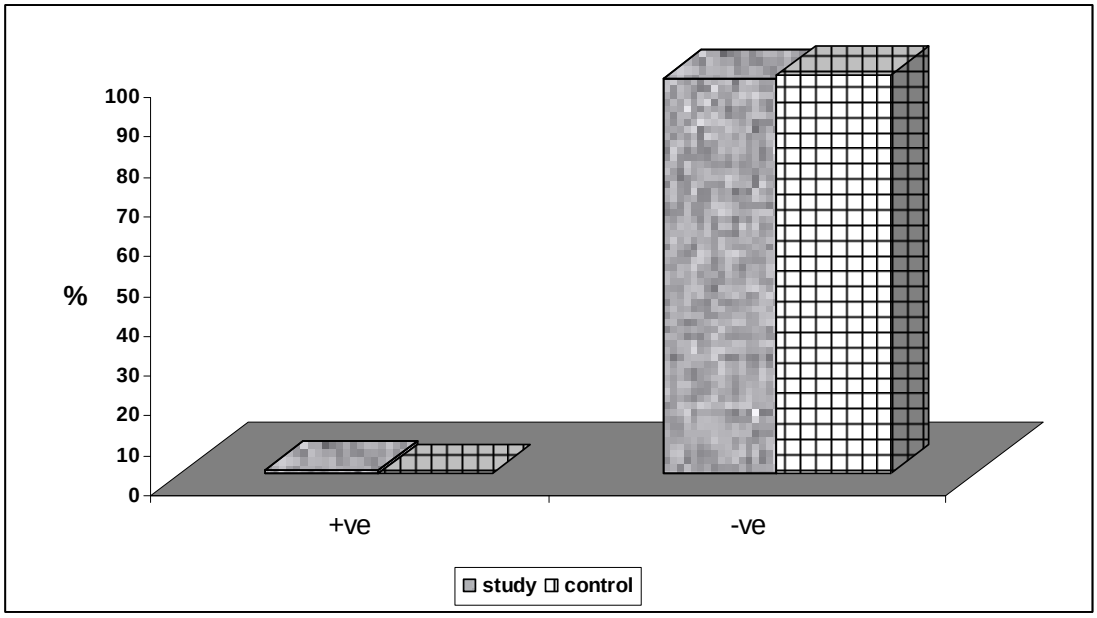

Fig. (23): Chart of abnormal ophthalmological examinations in study group (100n) versus control group (20n) at 24th week.