Results

Table (8): descriptive data of the studied patients before start of therapy.

Investigations	Mean ±SD	Range
PCR	534732.9 ±107760.5	1450-1500000
Prothrombin(sec.)	83.5 ± 9.3	60-100
Albumin (gm/dL)	4.4 ± 0.68	3.1-5.4
Billirubin (mg/dL.)	0.88 ± 0.31	0.19-1.92

Total number =1000
PCR=polymerase chain reaction of HCV RNA

Table (9): descriptive data of the studied patients before and during the therapy:

	Baseline Mean ±SD	Week 4 Mean ±SD	Week 12 Mean ±SD	Week 24 Mean ±SD
WBCs(1000/mm^3)	5884.9 ±2191.8	4260.2 ± 1454.2	3791.0± 1424.4	3629.5± 1279.9
Platelet	195.6 ±60.2x10^3	170.5 ± 81.6 x10^3	164.6± 82.4 x10^3	164.8± 63.4 x10^3
AST	50.3 ±87.6	38.4 ± 29.2	41.5± 40.1	39.5± 43.3
ALT	50.2 ±40.2	38.2 ± 28.1	40.2± 36.3	35.8± 37.1

WBCs=White blood cells
AST=Asparatate aminotransferase
AlT=Alanine aminotransferase

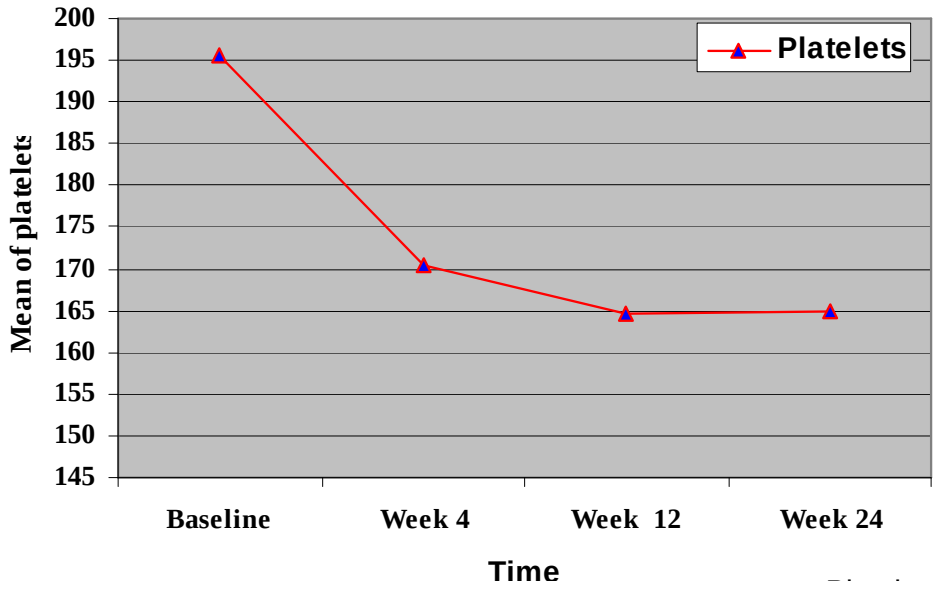

Fig 8: Mean value of platelets at different time sequence among the studied patients

Table(10): The response of patients to the therapy :

Status	Male (n=750)		Female (n=250)		Total (n=1000)	
	no		no		no	
Responder	380	(50.7%)	145	(58.0%)	525	(52.5%)
Resistant (12 w)	110	(14.7%)	25	(10.0%)	135	(13.5%)
Resistant (24 w)	115	(15.3%)	40	(16.0%)	155	(15.5%)
Missed	145	(19.3%)	40	(16.0%)	185	(18.5%)

no=number
%=percentage

Table (11): Comparison between the classified groups regarding the measured Platelets at different time sequence:

Platelet	Responder Mean ±SD (n=525)	Resist 12 Mean ±SD (n=135)	Resist 24 Mean ±SD (n=155)	Kruskal-wallis test	P value
Base	197.5±65.9 x10^3	195.9 ±44.6 x10^3	199.9±56.9 x10^3	0.95	0.62
W4	165.2±58.8 x10^3	180.1 ±58.4 x10^3	179.6±150.1 x10^3	8.35	0.02
W 12	158.1±68.3 x10^3	170.7 ±57.4 x10^3	164.2±121.9 x10^3	11.32	0.004
W 24	161.7±64.2 x10^3	180.4 ±60.2 x10^3	158.3±63.8 x10^3	10.33	0.006

Table (12): patients response according to histological activity index (HAI):

Activity	Responder (n=525)		Resist 12 (n=135)		Resist 24 (n=155)	
	no		no		no	
0	0	(0.0%)	5	(3.7%)	0	(0.0%)
1-4	397	(75.6%)	124	(91.9%)	125	(80.6%)
5-8	73	(13.9%)	6	(4.4%)	30	(19.4%)
9-12	55	(10.5%)	0	(0.0%)	0	(0.0%)

no=number
%=percentage

Table (13): patients response according to fibrosity stage :

Fibrosis	Responder (n=525)		Resist 12 (n=135)		Resist 24 (n=155)	
	no		no		no	
0	0	(0.0%)	10	(7.4%)	0	(0.0%)
1	200	(38.1%)	40	(29.6%)	80	(51.6%)
2	180	(34.3%)	25	(18.5%)	35	(22.6%)
3	110	(21.0%)	55	(40.7%)	30	(19.4%)
4	30	(5.7%)	5	(3.7%)	10	(6.5%)
5	5	(1.0%)	0	(0.0%)	0	(0.0%)

Table (14): platelet count and percentage before and after therapy in relation to patient respond :

Platelet level		Responder (n=525)		Resist 12 (n=135)		Resist 24 (n=155)	
		no		no		no	
Pretherapy	100-200 x10^3	315	(60.0%)	60	(44.4%)	90	(58.1%)
	200-400 x10^3	210	(40.0%)	75	(55.6%)	65	(41.9%)
Post-therapy	50-75 x10^3	45	(8.5%)	7	(5.0%)	12	(8.0%)
	75-100 x10^3	52	(9.9%)	0	(0.0%)	19	(12.0%)
	>100 x10^3	428	(81.7%)	128	(95.0%)	124	(80.0%)

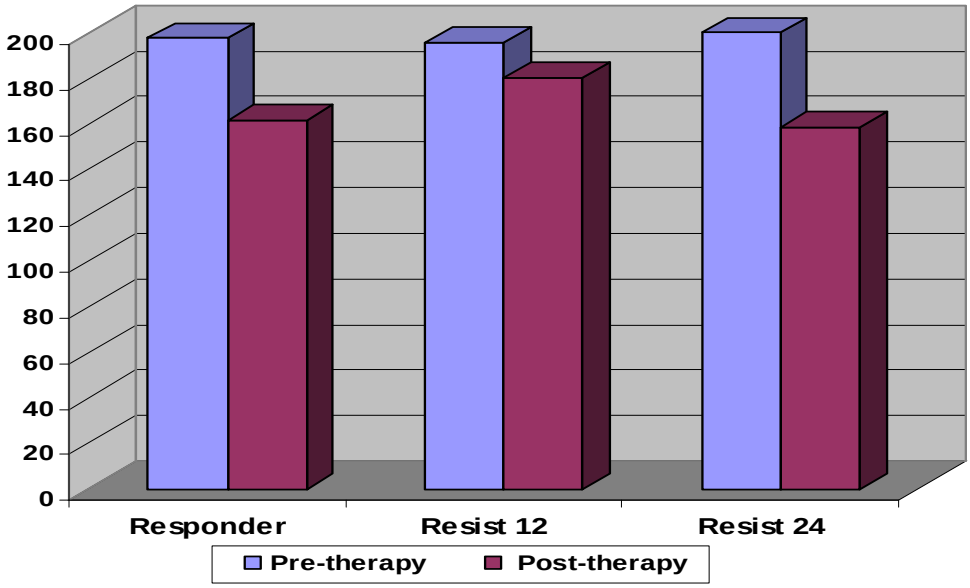

Fig 9: Mean value of platelets pre and post therapy within the studied groups

Table (15): Comparison between and within the studied groups regarding platelets pre and post therapy:

Platelet level	Responder Mean ±SD (n=525)	Resist 12 Mean ±SD (n=135)	Resist 24 Mean ±SD (n=155)	Krusk al-wallis test	P value
Pre-therapy	197.5 ± 65.9 $X10^3$	195.9 ± 44.6 $X10^3$	199.9 ± 56.9 $X10^3$	0.95	0.62
Post-therapy	161.7 ± 64.2 $X10^3$	180.4 ± 60.2 $X10^3$	158.3 ± 63.8 $X10^3$	10.33	0.006
Wilcoxon signed rank test	7.64	2.29	6.79		
P value	0.00	0.02	0.00		

Table (16): Mean value distribution of the platelets level Pre-therapy and the primary investigations:

	Platelet pre therapy		T-test	P value
	100-199 x10^3 Mean ±SD (n=590)	200-400 x10^3 Mean ±SD (n=410)		
PCR(pre)	502504.2 ± 114808.6	581110.8 ± 160816.7	# 2.16	0.03
Prothrombin(sec.)	72.1 ± 9.7	85.6 ± 8.2	6.03	0.04
Albumin(gm/dL)	4.1 ± 0.8	4.4 ± 0.5	2.79	0.005
Billirubin(mg/dL)	0.87 ± 0.3	0.89 ± 0.2	# 2.69	0.07

 # Mann-Whitney test
PCR=polymerase chain reaction of HCV RNA

Table (17): Mean value distribution of the platelets level Pre-therapy and baseline investigations:

	Platelet pre therapy		Mann-Whitney test	P value
	100-199 x10^3 Mean ±SD (n=590)	200--400 x10^3 Mean ±SD (n=410)		
WBCs(1000/mm^3)	5194.3 ± 1887.7	6313.2 ± 2499.2	3.56	0.001
AST	56.2 ± 111.4	48.7 ± 27.5	1.32	0.19
ALT	50.9 ± 44.6	47.3 ± 32.6	1.0	0.32

WBCs=White blood cells
AST=Asparatate transeaminase
AlT=Alaninetranseaminase

Table (18): Mean value distribution of the platelets level (Post-therapy) and the primary investigations:

	Platelet post-therapy			Kruskal-wallis test	P value
	50000-75000 Mean ±SD (n=55)	≥75000-100000 Mean ±SD (n=65)	>100000 Mean ±SD (n=615)		
PCR(pre.)	194760.6 ± 156574.7	327986.7 ± 153459.3	558139.8 ± 117233.0	# 0.63	0.03
Prothrombin(sec.) (pre.)	75.5 ± 8.2	78.7 ± 10.3	84.8 ± 9.1	36.24	0.08
Albumin(gm/dL) (pre.)	3.9 ± 0.4	4.5 ± 0.3	4.4 ± 0.5	3.68	0.03
Billirubin(mg/dL) (pre.)	0.84 ± 0.2	0.78 ± 0.2	0.89 ± 0.3	# 1.26	0.26

 # F test
PCR=polymerase chain reaction of HCV RNA

Table (19): Mean value distribution of the platelets level (Post-therapy) and week 24 investigations:

	Platelet post-therapy			Kruskal-wallis test	P value
	50000-<75000 Mean ±SD (n=55)	≥75000-100000 Mean ±SD (n=65)	>100000 Mean ±SD (n=615)		
WBCs(1000/mm^3) (pre.)	2865.5 ± 830.9	3016.9 ± 1020.2	3762.6 ± 1295.9	0.73	0.39
AST(pre.)	55.1 ± 46.0	47.4 ± 19.8	37.1 ± 33.7	6.30	0.01
ALT(pre.)	39.4 ± 25.2	40.6 ± 18.8	34.8 ± 28.4	4.19	0.04

WBCs=White blood cells
AST=Asparatate transferase
AlT=Alanine amino transferase

Table(20): Number and percent distribution of platelet level (post-therapy) regarding Necro-inflammatory score:

Activity grading	Platelet post-therapy					
	50000-75000 (n=55)		≥75000-100000 (n=65)		>100000 (n=615)	
	no		no		no	
0	0	(0.0%)	0	(0.0%)	5	(0.8%)
1-4	35	(63.6%)	54	(83.1%)	497	(80.8%)
5-8	10	(18.2%)	11	(16.9%)	78	(12.7%)
9-12	10	(18.2%)	0	(0.0%)	35	(5.7%)

Table (21): Number and percent distribution of platelet level (post-therapy) regarding Fibrosis scores:

Fibrosis staging	Platelet post-therapy					
	50000-75000 (n=55)		≥75000-100000 (n=65)		>100000 (n=615)	
	no		no		no	
0	0	(0.0%)	0	(0.0%)	5	(0.80%)
1	20	(36.4%)	30	(46.2%)	220	(35.8%)
2	20	(36.4%)	30	(46.2%)	205	(33.3%)
3	5	(9.1%)	5	(7.7%)	140	(22.8%)
4	10	(18.2%)	0	(0.0%)	35	(5.7%)
5	0	(0.0%)	0	(0.0%)	10	(1.6%)

This retrospective study included 1000 patients with chronic hepatitis C virus infection who were attended and treated with interferon and followed up for a minimum of six months in Liver Research Centre, Tanta Fever Hospital.

As shown in table (8), descriptive data of the studied patients before start of therapy shows screened quantative HCV,RNA PCR that the average was (534732.9 ±1077609.5) from a minimal level 1450 IU/ml to a maximum level 1500000IU/m in the patients serum, shows screened prothrmbin per second that the average was (83.5 ± 9.3) from a minimal level 60 secod to a maximum level 100 second in the patients serum, shows screened albumin per gm/dl that the average was (4.4 ± 0.68) from a minimal level 3.1 gm/dl to a maximum level 5.4 gm/dl in the patients serum and shows screened bilirubin per mg/dl that the average was (0.88 ± 0.31) from a minimal level 0.19mg/dl to a maximum level 1.92 mg/dl in the patients serum.

As shown in table (9),descriptive data of the studied patients before start and during the therapy shows

1-WBCs, before therapy was (5884.9 ±2191.8) ,4weeks after therapy was(4260.2 ± 1454.2),12 weeks after therapy was(3791.0± 1424.4) and 24 weeks after therapy was(3629.5± 1279.9).

2- platelets, before therapy was (195.6 ±60.2) ,4weeks after therapy was(170.5 ± 81.6),12 weeks after therapy was(164.6± 82.4) and24 weeks after therapy was(164.8± 63.4).

3 -AST, before therapy was (50.3 ±87.6) ,4weeks after therapy was(38.4 ± 29.2),12 weeks after therapy was(41.5± 40.1) and24 weeks after therapy was(39.5± 43.3)

4- ALT, before therapy was (50.2 ±40.2) ,4weeks after therapy was(38.2 ± 28.1),12 weeks after therapy was(40.2± 36.3) and24 weeks after therapy was(35.8± 37.1).

Table(10) shows the response of the patients to the therapy. It was revealed that the total patients who respond to therapy are 525 (380 males,145 female), those who resist the therapy at week 12 were 135patients (110 males,25female), those was resistant at week 24 were 155 patients (115males ,40 females),the number of missed patients were 185(145males ,40 females) .

Table (11) shows the comparison between the classified groups regarding the measured platelets at different time sequence, it was revealed that there is no statistically difference between different groups platelets count at the baseline measurement (p-value >0.05), but revealed that at 4^{th} week the responder group platelets (165.2±58.8)was statistically significant lower than other resistant12(180.1 ±58.4) and resistant24 groups(180.1 ±58.4) (p-value <0.05), and the resistant 12 platelet (170.7±57.4)was statistically higher than other responder(158.1±68.3) and resistant24(164.2±121.9) groups at the 12th week (p-value <0.05) and also shows that the platelets was significantly higher of the resistant12(180.4±60.2) group than either responder (161.7±64.2)and resistant 24(158.3±63.8) groups at the 24 weeks (p-value <0.05).

Table(12) shows patients respond in relation to histological activity index. it was revealed that 397(75.6%) patients out of 646 patients with grade 1-4 HAI showed response to therapy and 124(91.9%) patients were resistant at 12 week, 125(80.6%) patients were resistant at week 24.

Also it was revealed that 73(13.9%) patients out of 109 patients with grade 5-8 HAI showed response to therapy and 6(4.4%) patients were resistant at 12 week, 30(19.4%) patients were resistant at week 24.

Also it was revealed that 55(10.5%) patients out of 55 patients with grade 9-12 HAI showed response to therapy.

Table(13) shows the patients response in relation to fibrosis stages. It was revealed that 200(38.1%)patients out of 320 with fibrosis stage 1 showed response to therapy, 40(29.6%)patients were resistant at week12 and 80(51.6%)patients were resistant at week 24.

Also, It was revealed that 180(34.31%)patients out of 240 with fibrosis stage 2 showed response to therapy, 25(18.5%)patients were resistant at week12 and 350(22.6%)patients were resistant at week 24.

Also, It was revealed that 110(21.0%)patients out of 195 with fibrosis stage 3 showed response to therapy, 55(40.7%)patients were resistant at week12 and 30(19.4%)patients were resistant at week 24.

Also, It was revealed that 30(5.7%)patients out of 45 with fibrosis stage 4 showed response to therapy, 5(3.7%)patients were resistant at week12 and 10(6.5%)patients were resistant at week 24.

Also, It was revealed that 5(1.0%)patients out of 5 with fibrosis stage 5 showed response to therapy.

Table(14) shows the platelet count and patients percent before and after therapy in relation to patients respond:

Pre therapy with platelet count 100000-200000,responded patients (no=315) (60.0%), resistant 12 patients (no=60) (44.4%), resistant 24 patients (no=90) (58.1%). with platelet count 200000-400000,responded patients (no=210) (40.0%), resistant 12 patients (no=75) (55.6%), resistant 24 patients (no=65) (41.9%.).

post therapy with platelet count 50000-75000,responded patients (no=30) (8.5%), resistant 12 patients (no=5) (5.0%), resistant 24 patients (no=10) (8.0%). with platelet count 75000-100000,responded patients (no=35) (9.9%), resistant 12 patients (no=0) (0.0%), resistant 24 patients (no=15) (12.0%.) with platelet count >100000,responded patients (no=290) (81.7%), resistant 12 patients (no=950) (95.0%), resistant 24 patients (no=100) (80.0%.).

Table (15) shows that there is no statistically significant difference between the responder, resistant 12 and resistant 24 groups (197.5 ± 65.9)(195.9 ± 44.6)(199.9 ± 56.9)regarding the pre-therapy platelet level but there was significant (p-value<0.05)lower platelet count in resistant 24 group(158.3 ± 63.8) than other groups(161.7 ± 64.2)(180.4 ± 60.2) in the post-therapy level, Also it shows that the platelet level was significantly lower in post-therapy(161.7 ± 64.2)(180.4 ± 60.2)(158.3 ± 63.8) patients than the pre-therapy patients(197.5 ± 65.9)(195.9 ± 44.6)(199.9 ± 56.9) in all the groups respectively(p-value<0.05)(p-value<0.05)(p-value<0.05).

Table (16) shows that the mean value distribution of platelet level pre-therapy and primary investigations ,This table revealed that the PCR count was significantly lower in the patients group with platelet count (100-199 $x10^3$) than patients with platelet count (200-400x 10^3) (p-value<0.05),also it shows that the prothrombin by second was significantly lower in patients with platelet count (100-199 $x10^3$)than patients with platelet count (200-400x 10^3) (p-value<0.05), also it shows that the albumin by grams was significantly lower in patients with platelet count (100-199 $x10^3$)than patients with platelet count (200-400x 10^3) (p-value<0.05) and it shows that the billirubin by mg was insignificantly lower in patients with platelet count (100-199 $x10^3$)than patients with platelet count (200-400x 10^3) (p-value<0.05).

Table (17)shows the mean value distribution of the platelets level pre-therapy and the base line investigations, This table shows that WBCs(1000/mm3) was statistically significant lower in patients group with platelet count (100-199x $\mathbf{10^3}$)than patients with platelet count (200-400x $\mathbf{10^3}$) (p-value<0.05) but there is no significant difference between AST and ALT of both groups in the pre-therapy groups(p-value>0.05) (p-value>0.05).

Table (18)shows the mean value distribution of the platelets level post-therapy and the primary investigations, This table revealed that the PCR count was significantly lower in patients group with platelet count (50-75x 10^3)than both patients group with platelets count (75-100x 10^3) and (>100x 10^3) (p-value>0.05), but the table shows that the prothrombin by second was insignificantly lower in patients with platelet count (50-75x 10^3)than patients with platelet count (75-100x 10^3)(>100x 10^3) (p-value<0.05), also it reveals that the albumin by grams was significantly lower in patients with platelet count (50-75x 103)than patients with platelet count (75-100x 10^3)(>100x 10^3) (p-value<0.05) and it shows that the billirubin by mg was insignificantly higher in patients with platelet count (50-75x 103)than patients with platelet count ((75-100x 10^3)(>100x 10^3)(p-value>0.05).

Table (19) shows the mean value distribution of the platelets level post-therapy and week 24 investigations, the table shows that WBCs(1000/mm3) was insignificantly lower in patients group with platelet count (>100x 10^3)than patients with platelet count (<100x 10^3) (p-value>0.05) but it revealed that ALT and AST was significantly lower in patients group with platelet count (>100x 10^3)than other patients group with platelet count (<100x 10^3) in post-therapy groups (p-value<0.05).

Table(20) shows subdivided patients according to the platelet count at the end of therapy in relation to histological activity index. it was revealed that 35(36.6%)patients out of 586patients with grade 1-4HAI showed platelet level 50000-75000,54(83.1%)patients were platelet level 75000-100000 and 497(80.8)patients with platelet level more than 100000.

Also it was revealed that 10(18.2%)patients out of 996 patients with grade 5-8HAI showed platelet level 50000-75000,11(16.9%)patients were

platelet level 75000-100000 and 78(12.7)patients with platelet level more than 100000.

Also it was revealed that 10(18.2%)patients out of 45 patients with grade 9-12HAI showed platelets level 50000-75000,no(0.0%)patients were platelet level 75000-100000 and 35(5.7)patients with platelet level more than 100000.

Table(21) shows subdivided patients according to the platelet count at the end of therapy in relation to fibrosis stages. It was revealed that , 20(36.4%)patients out of 270 patients with fibrosis stage1 showed platelets 50000-75000, 30(46.2%)patients with platelets level 75000-100000 and 220(35.8%)patients with platelets level more than 100000.

Also it was revealed that , 20(36.4%)patients out of 255 patients with fibrosis stage 2 showed platelets 50000-75000, 30(46.2%)patients with platelets level 75000-100000 and 205(33.3%)patients with platelets level more than 100000.

Also it was revealed that 5(9.1%)patients out of 150 patients with fibrosis stage 3 showed platelets 50000-75000, 5(7.7%)patients with platelets level 75000-100000 and 140(22.8%)patients with platelets level more than 100000.

Also it was revealed that 10(18.2%)patients out of 45 patients with fibrosis stage 4 showed platelets 50000-75000, no patients with platelets level 75000-100000 and 35(5.7%)patients with platelets level more than 100000.

Also it was revealed that , 10(1.6%)patients out of 10 patients with fibrosis stage 5 showed platelets level more than 100000.