

Results

Fig:1
Kidney functions in the studied groups

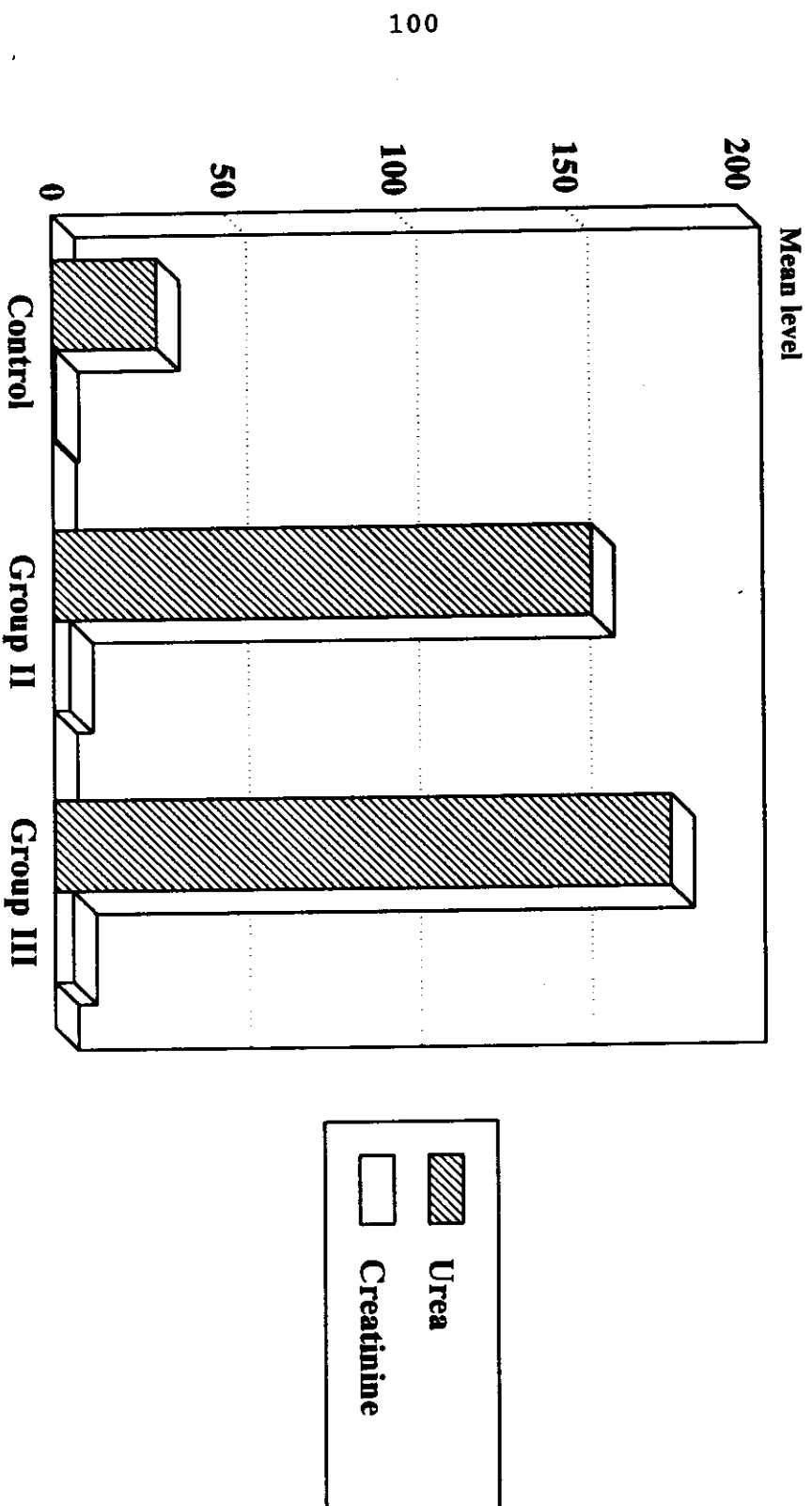


Fig:2
Liver functions in the studied groups

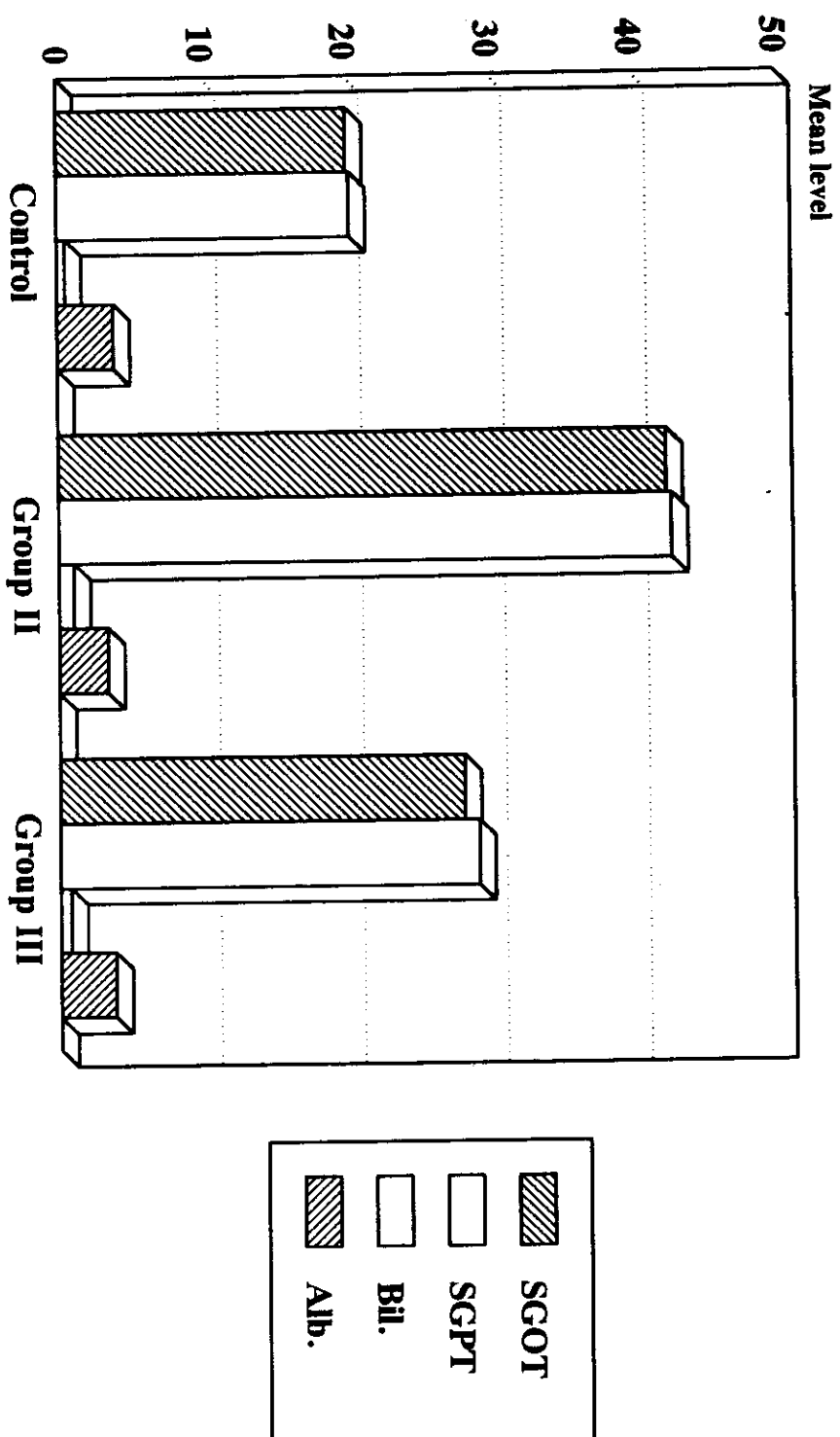
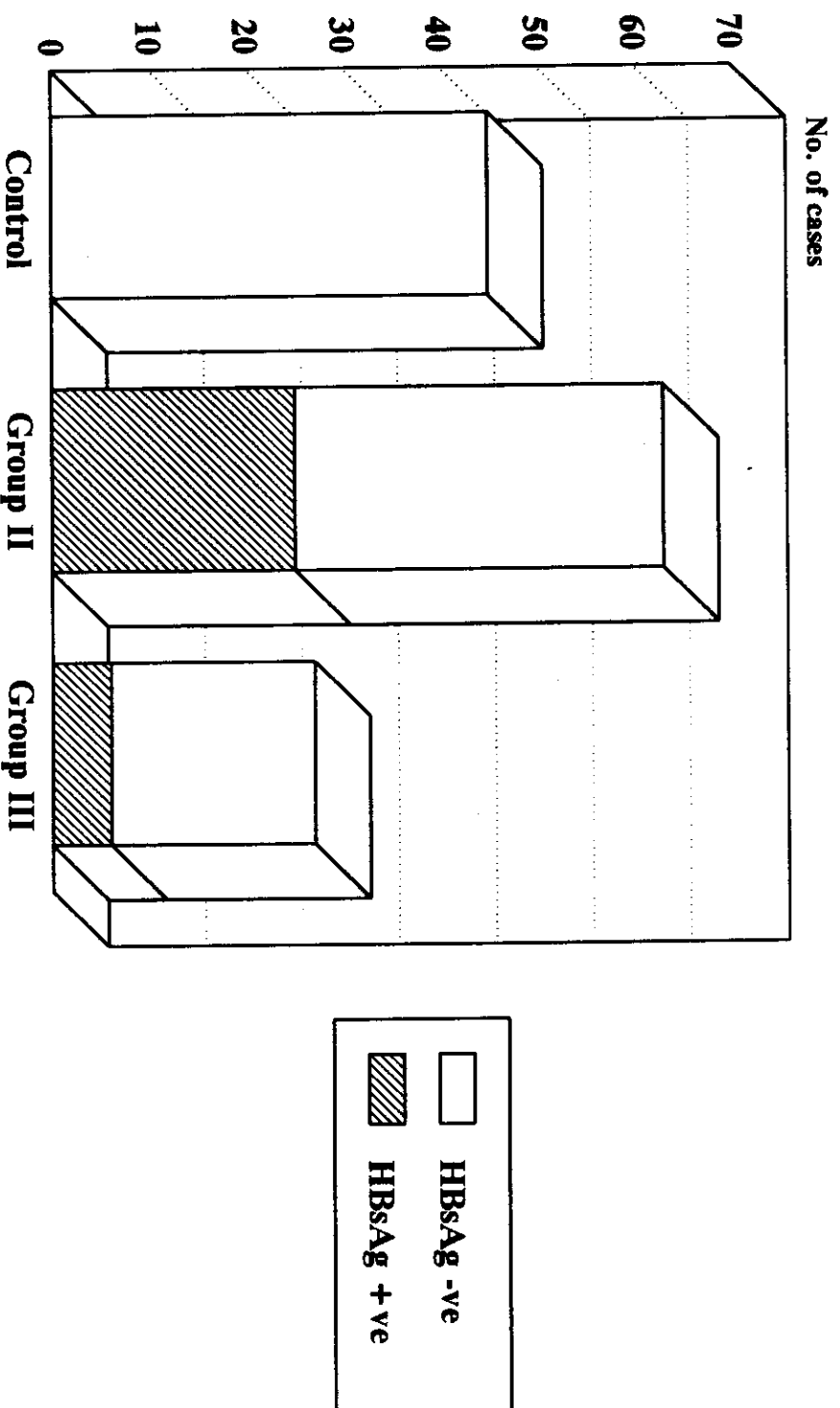
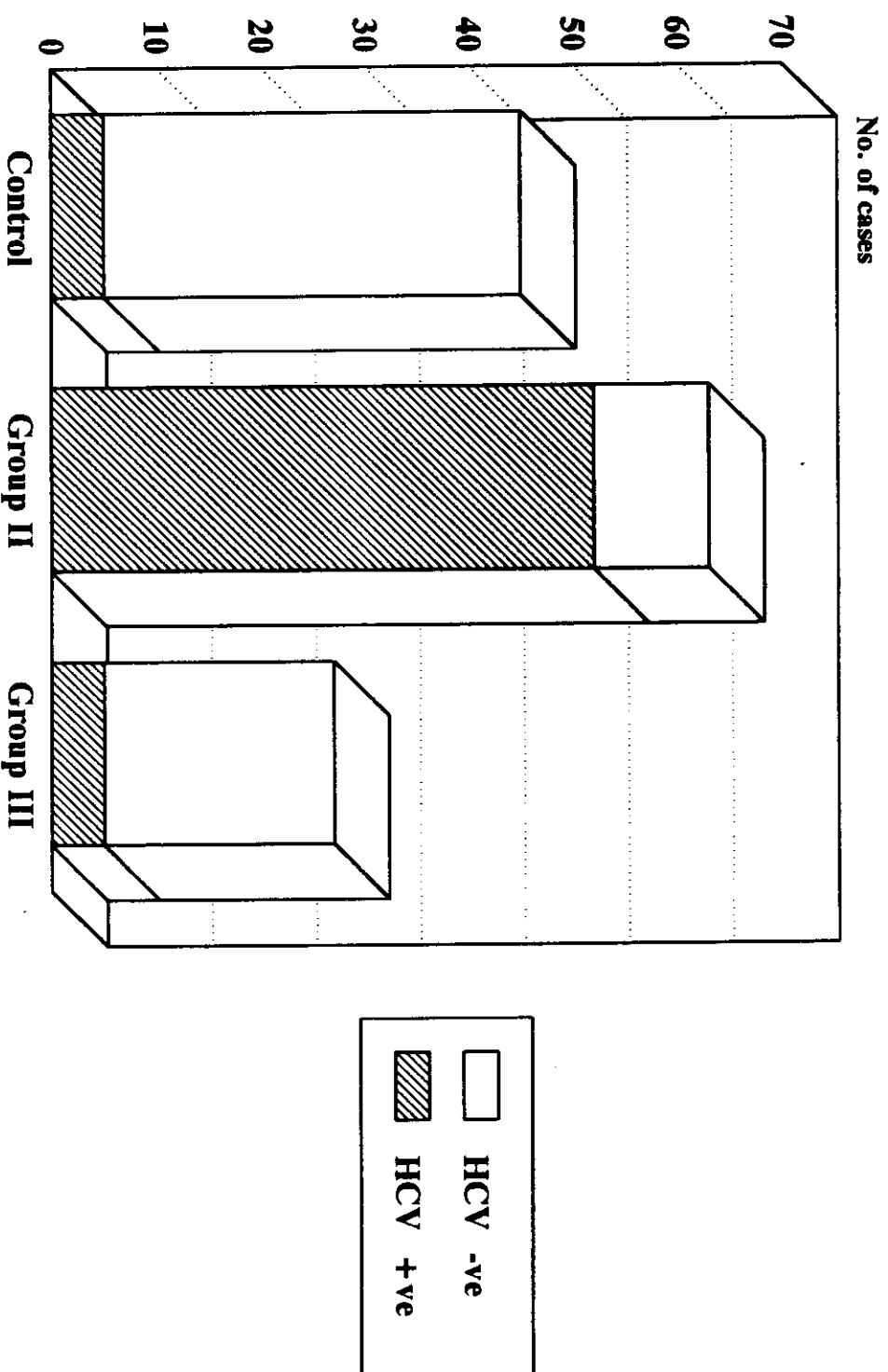


Fig:3
Prevalence of HBsAg in the studied groups



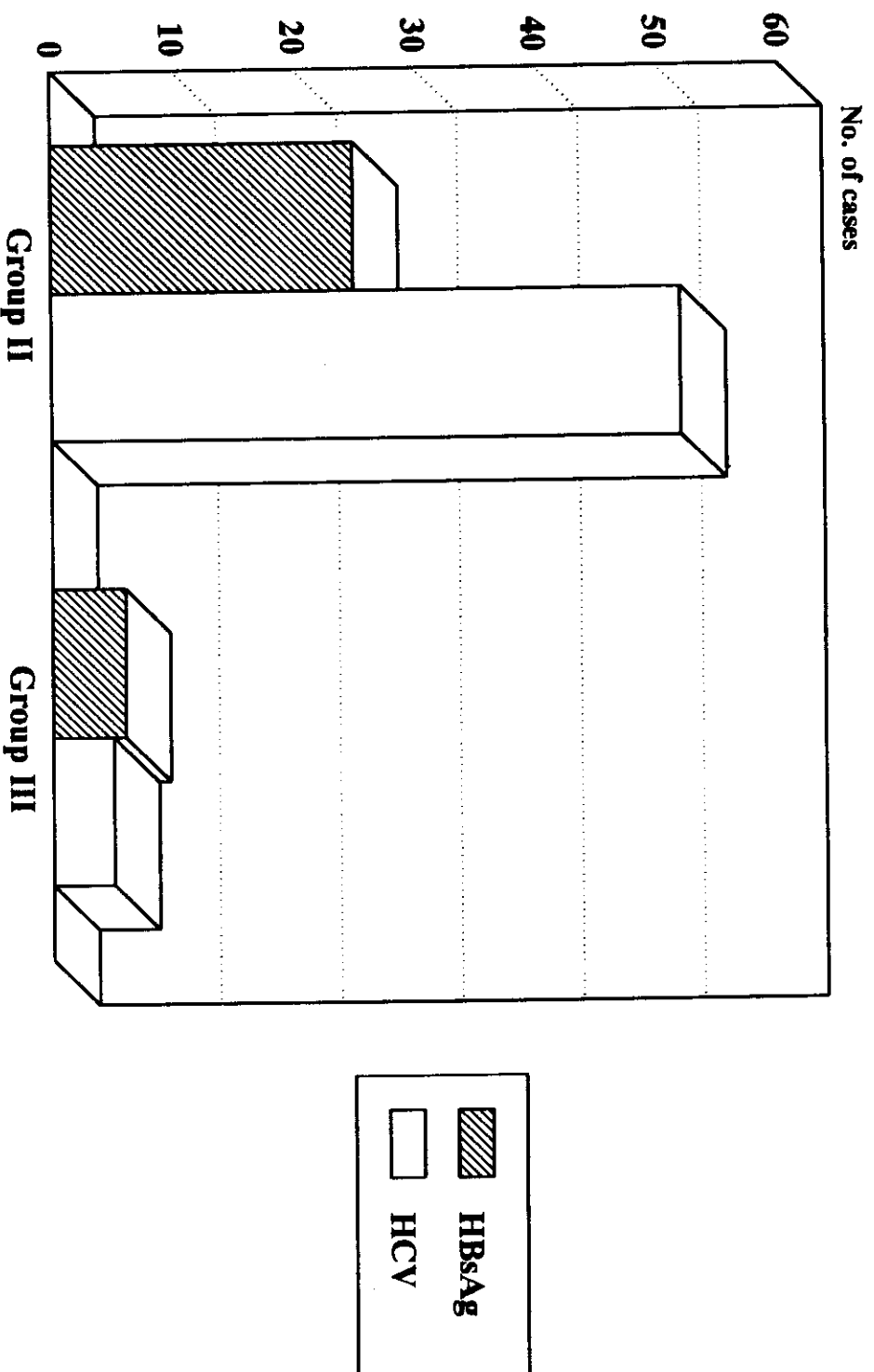
- The prevalence of HBsAg is higher in group II than in group III, but the difference is statistically insignificant

Fig:4
Prevalence of HCV in the studied groups



- The prevalence of HCV is higher in group II than group I & III
- The difference in the prevalence of HCV between group II & III

Fig:5
Prevalence of HBsAg & HCV in group II and III



- The prevalence of HBsAg & HCV are higher in group II than group III
- In group II: The prevalence of HCV is higher than HBsAg
- In Group III: The Prevalence of HBsAg is higher than HCV

A- Group I (Control group): (Table 1 & 2)

- Their ages ranged from 22 to 45 years with a mean value of 31.5 ± 7.3 .
- Urea level, ranged from 14 to 40 mg% with a mean value of 30.4 ± 7.5 .
- Creatinine level, ranged from 0.4 to 1.2 mg% with a mean value of 0.88 ± 0.24 .
- SGOT ranged from 11 to 42 u/L with a mean value of 20.2 ± 7.18 .
- SGPT level, ranged from 12 to 49 u/L with a mean value of 20.4 ± 8.25 .
- Bilirubin level, ranged from 0.1 to 1.3 mg% with a mean value of 0.56 ± 0.32 .
- Albumin level, ranged from 3.2 to 4.5 gm% with a mean value of 3.9 ± 0.29 .
- Prothrombin time, ranged from 10 to 24 seconds with a mean value of 13.5 ± 3.2 .
- HBsAg was (-ve) in all cases.
- HCV Ab was (+ve) in 5 cases.

Table 1: Group I (Control), 45 cases apparently normal with no history of blood transfusion or dialysis.

	Sex	Age	HBsAg	HCV	Urea	Creatinine	SGOT	SGPT	Bil.	Albumin	Prothrombin time
1	M	23	- ve	- ve	20	0.6	19	15	0.2	3.7	11
2	F	23	- ve	- ve	14	0.4	33	17	0.3	3.8	15
3	M	24	- ve	- ve	38	1.1	12	14	0.3	3.9	14
4	M	22	- ve	- ve	37	1.1	18	21	0.2	4.0	14
5	M	25	- ve	- ve	16	0.4	19	21	0.8	4.0	12
6	F	30	- ve	- ve	40	1.2	17	20	0.9	4.2	10
7	F	36	- ve	- ve	40	1.2	13	14	0.1	4.1	15
8	F	26	- ve	- ve	33	0.9	16	29	0.5	3.6	13
9	F	31	- ve	- ve	19	0.5	30	19	0.9	3.7	12
10	M	33	- ve	- ve	16	0.4	18	17	0.7	3.9	13
11	M	39	- ve	- ve	22	0.6	20	15	0.6	4.2	11
12	F	40	- ve	- ve	35	1.0	32	15	0.6	4.0	16
13	F	27	- ve	- ve	36	1.1	12	12	0.9	4.1	11
14	F	32	- ve	- ve	38	1.1	19	19	0.7	3.9	14
15	F	34	- ve	- ve	31	0.9	17	21	0.5	3.8	12
16	M	40	- ve	- ve	29	0.8	13	12	0.5	3.7	17
17	M	33	- ve	- ve	30	0.9	16	29	0.4	4.0	10
18	M	28	- ve	- ve	18	0.5	29	14	0.2	4.1	16
19	F	35	- ve	- ve	21	0.6	17	15	0.2	4.3	13
20	M	29	- ve	- ve	37	1.1	16	20	0.8	4.2	11
21	F	43	- ve	- ve	20	0.6	13	18	0.2	3.9	10
22	M	40	- ve	+ ve	37	1.1	15	22	1.3	3.2	21
23	M	45	- ve	- ve	33	0.9	11	13	0.8	3.9	14
24	M	41	- ve	+ ve	36	1.0	25	31	1.3	3.4	20
25	M	23	- ve	- ve	38	1.1	28	12	0.7	3.5	14
26	F	27	- ve	+ ve	40	1.2	27	33	0.9	3.3	19
27	M	26	- ve	- ve	37	1.1	16	13	0.7	3.8	13
28	F	38	- ve	- ve	40	1.1	25	12	0.3	4.1	12

	Sex	Age	HBsAg	HCV	Urea	Creatinine	SGOT	SGPT	Bil.	Albumin	Prothrombin time
29	M	33	- ve	- ve	33	0.8	15	33	0.2	3.9	13
30	M	23	- ve	- ve	28	0.8	19	26	0.4	4.4	12
31	M	22	- ve	- ve	26	0.7	15	14	0.5	4.0	13
32	F	44	- ve	- ve	30	0.8	21	19	0.5	3.9	11
33	M	43	- ve	- ve	35	1.1	21	26	0.8	3.8	12
34	F	44	- ve	+ ve	38	1.1	26	32	1.2	3.6	24
35	M	39	- ve	- ve	29	0.8	12	14	0.1	3.8	10
36	F	39	- ve	- ve	31	0.9	33	40	0.3	4.2	14
37	M	28	- ve	+ ve	34	1.1	42	49	1.2	3.4	21
38	F	22	- ve	- ve	24	0.7	27	21	0.4	4.5	10
39	F	35	- ve	- ve	27	0.8	13	26	0.2	4.3	16
40	M	25	- ve	- ve	32	0.9	26	30	0.7	3.9	10
41	F	28	- ve	- ve	37	1.1	17	13	0.8	4.1	12
42	F	24	- ve	- ve	20	0.6	30	15	0.7	4.2	11
43	M	31	- ve	- ve	28	0.8	18	19	0.3	3.8	11
44	M	22	- ve	- ve	33	1.2	12	13	0.3	4.0	12
45	M	24	- ve	- ve	36	1.0	16	19	0.4	3.9	13

Table 2: Laboratory data for group I (Mean & S.D.):

	Variable	Mean	S.D	Minimum	Maximum
1	Age	31.5	7.3	22	45
2	Urea	30.4	7.5	14	40
3	Creatinine	0.88	0.24	0.4	1.2
4	SGOT	20.2	7.18	11	42
5	SGPT	20.4	8.25	12	49
6	Bilirubin	0.56	0.32	0.1	1.3
7	Albumin	3.9	0.29	3.2	4.5
8	Prothrombin time	13.5	3.2	10	24

B- Group II (Chronic renal failure patients with history of blood transfusion):(Table 3, 4)

- Their ages ranged from 20 to 55 years with a mean value of 39.9 ± 10.89
- Urea level, ranged from 65 to 257 mg% with a mean value of 157 ± 56.28 .
- Creatinine level, ranged from 2 to 7.7 mg% with a mean value of 4.65 ± 1.66 .
- SGOT level, ranged from 15 to 95 u/L with a mean value of 42.39 ± 20.95 .
- SGPT level, ranged from 12 to 80 u/L with a mean value of 42.76 ± 20.85 .
- Bilirubin level, ranged from 0.2 to 1.6 mg% with a mean value of 1.03 ± 0.3 .
- Albumin level, ranged from 3 to 4.2 gm% with a mean value of 3.37 ± 0.23 .
- Prothrombin time level, ranged from 10 to 26 seconds with a mean value of 19.34 ± 3.83 .
- HBsAg was (+ ve) in 25 cases.
- HCV Ab was (+ ve) in 52 cases.

Table 3: Group II, 63 cases (Chronic renal failure patients with history of blood transfusion and undergoing regular haemodialysis).

	Sex	Age	HBsAg	HCV	Urea	Creatinine	SGOT	SGPT	Bil.	Albumin	Prothrombin time
1	F	20	- ve	+ ve	243	7.3	37	30	0.7	3.2	20
2	M	33	- ve	+ ve	153	4.8	28	14	1.2	3.1	15
3	M	23	- ve	+ ve	255	7.2	39	23	0.9	3.2	19
4	M	26	+ ve	+ ve	170	5.0	82	68	1.0	3.3	22
5	F	55	+ ve	+ ve	177	5.1	70	78	0.96	3.3	15
6	F	22	+ ve	+ ve	150	4.5	75	80	1.4	3.1	18
7	F	29	- ve	+ ve	147	4.1	24	30	0.9	3.5	20
8	F	20	- ve	+ ve	208	6.4	17	19	0.7	3.4	16
9	F	22	+ ve	+ ve	244	7.3	81	75	1.1	3.0	16
10	F	46	+ ve	+ ve	185	5.6	95	80	0.95	3.2	23
11	M	41	- ve	+ ve	207	6.2	25	32	1.3	3.4	24
12	M	44	+ ve	+ ve	209	6.2	88	70	1.5	3.5	16
13	F	52	- ve	+ ve	250	7.5	42	41	1.2	3.7	19
14	M	46	- ve	+ ve	162	4.4	60	55	1.1	3.5	17
15	F	23	+ ve	+ ve	166	5.0	60	66	1.5	3.2	17
16	F	43	+ ve	+ ve	157	4.7	73	71	1.2	3.0	25
17	M	46	+ ve	+ ve	155	4.6	59	65	0.8	3.3	17
18	F	44	+ ve	+ ve	173	5.6	70	79	1.3	3.6	16
19	M	36	- ve	+ ve	180	5.4	24	30	0.8	3.3	18
20	M	50	- ve	+ ve	170	5.1	15	20	0.7	3.2	25
21	M	39	- ve	+ ve	70	2.1	31	25	0.9	3.4	25
22	F	54	- ve	- ve	92	2.7	16	13	0.4	3.8	10
23	M	40	- ve	+ ve	112	3.6	32	40	1.0	3.5	20
24	M	39	- ve	+ ve	130	3.3	25	31	0.96	3.2	18
25	M	34	- ve	+ ve	85	2.5	23	29	1.4	3.4	20
26	M	39	+ ve	+ ve	70	2.3	59	51	1.2	3.5	20
27	M	44	+ ve	+ ve	80	2.5	48	56	1.1	3.5	21
28	F	53	+ ve	- ve	190	3.7	30	38	1.3	3.2	26
29	F	26	+ ve	+ ve	92	2.5	63	70	1.4	3.6	19
30	M	28	+ ve	- ve	144	4.8	54	45	1.4	3.6	20
31	M	36	- ve	- ve	125	3.3	19	15	0.2	4.2	10

	Sex	Age	HBsAg	HCV	Urea	Creatinine	SGOT	SGPT	Bil.	Albumin	Prothrombin time
32	M	34	- ve	- ve	180	5.4	15	14	0.3	3.9	10
33	F	52	- ve	+ ve	75	2.2	25	31	0.9	3.2	15
34	M	41	- ve	+ ve	90	2.8	67	58	0.75	3.4	19
35	M	55	- ve	+ ve	244	7.3	22	38	0.9	3.1	23
36	F	44	- ve	+ ve	155	4.5	28	15	1.6	3.2	16
37	M	48	- ve	+ ve	257	7.7	27	33	1.2	3.2	19
38	F	53	+ ve	+ ve	180	5.3	70	76	0.8	3.1	23
39	F	49	- ve	- ve	140	4.2	19	15	0.8	3.9	15
40	M	44	- ve	+ ve	243	7.2	33	35	0.9	3.0	19
41	F	40	- ve	+ ve	177	5.3	29	28	0.9	3.4	20
42	F	21	+ ve	+ ve	180	5.5	55	49	1.4	3.2	22
43	M	23	- ve	+ ve	65	2.0	50	42	1.3	3.5	16
44	M	54	- ve	+ ve	75	2.3	30	22	1.3	3.1	20
45	F	48	+ ve	- ve	204	6.1	53	38	1.2	3.6	23
46	M	55	+ ve	+ ve	255	7.6	60	69	1.0	3.0	16
47	M	50	+ ve	- ve	201	6.0	39	52	1.2	3.2	20
48	M	33	+ ve	+ ve	175	5.2	60	69	1.5	3.2	24
49	M	27	- ve	+ ve	101	3.0	33	31	1.1	3.2	17
50	M	52	- ve	+ ve	202	6.1	24	30	0.8	3.3	24
51	M	47	+ ve	- ve	99	3.2	40	52	1.3	3.6	17
52	M	53	+ ve	+ ve	178	5.3	60	66	1.4	3.3	22
53	F	46	- ve	+ ve	95	2.9	35	40	1.2	3.4	25
54	F	22	+ ve	- ve	180	5.3	70	78	1.2	3.4	18
55	M	51	- ve	- ve	126	3.8	15	12	0.9	3.5	14
56	M	46	- ve	+ ve	145	4.2	33	39	1.3	3.3	17
57	M	22	- ve	+ ve	93	2.9	23	30	0.85	3.6	21
58	F	43	- ve	+ ve	191	5.7	32	33	0.95	3.5	25
59	F	37	+ ve	+ ve	81	2.5	44	50	0.86	3.6	18
60	M	38	- ve	+ ve	71	2.1	37	30	0.89	3.4	21
61	F	40	- ve	+ ve	86	2.7	30	15	1.1	3.5	26
62	F	45	- ve	+ ve	243	7.2	34	43	0.3	3.6	22
63	M	50	- ve	+ ve	153	4.6	15	22	0.5	3.4	18

Table 4: Laboratory data for group II (Mean & S.D.):

	Variable	Mean	S.D	Minimum	Maximum
1	Age	39.9	10.89	20	55
2	Urea	157	56.28	65	257
3	Creatinine	4.65	1.66	2	7.7
4	SGOT	42.39	20.95	15	95
5	SGPT	42.76	20.85	12	80
6	Bilirubin	1.03	0.30	0.2	1.6
7	Albumin	3.37	0.23	3	4.2
8	Prothrombin time	19.34	3.83	10	26

C- Group III (Chronic renal failure patients without history of blood transfusion): (Table 5, 6)

- Their ages ranged from 18 to 52 years with a mean value of 33.07 ± 11.93 .
- Urea level, ranged from 79 to 256 mg% with a mean value of 179.66 ± 51.53 .
- Creatinine level, ranged from 2.2 to 7.8 mg% with a mean value of 5.42 ± 1.5 .
- SGOT level, ranged from 11 to 76 u/L with a mean value of 28.2 ± 14.7 .
- SGPT level, ranged from 12 to 71 u/L with a mean value of 29.2 ± 16.1 .
- Bilirubin level, ranged from 0.1 to 1.4 mg% with a mean value of 0.72 ± 0.38 .
- Albumin level, ranged from 3 to 4.5 gm% with a mean value of 3.8 ± 0.4 .
- Prothrombin time level, ranged from 10 to 25 seconds with a mean value of 14.9 ± 4.2 .
- HBsAg was (+ ve) in 6 cases.
- HCV Ab was (+ ve) in 5 cases.

Table 5: Group III: 27 cases (chronic renal failure patients undergoing regular haemodialysis without history of blood transfusion).

	Sex	Age	HBsAg	HCV	Urea	Creatinine	SGOT	SGPT	Bil.	Albumin	Prothrombin time
1	M	20	+ ve	- ve	243	7.8	39	34	1.1	3.2	24
2	M	25	+ ve	- ve	256	7.7	60	67	1.3	3.4	15
3	F	26	+ ve	- ve	169	5.2	50	55	0.95	3.8	17
4	F	22	+ ve	- ve	170	5.1	30	24	0.97	3.0	25
5	M	21	- ve	+ ve	98	3.0	26	22	0.83	3.1	21
6	M	27	- ve	- ve	149	4.5	38	50	0.7	4.2	10
7	M	44	- ve	+ ve	203	6.2	25	19	0.9	3.5	18
8	M	52	- ve	+ ve	182	5.5	22	24	1.4	3.3	20
9	M	37	- ve	- ve	181	5.5	25	29	0.8	4.4	14
10	F	22	- ve	- ve	87	2.6	17	17	0.7	4.0	10
11	F	28	- ve	- ve	200	6.1	28	35	0.2	3.9	15
12	F	34	- ve	- ve	88	2.6	15	28	0.3	3.8	10
13	F	18	- ve	+ ve	79	2.2	29	23	1.2	3.6	19
14	M	23	- ve	- ve	241	7.3	35	50	0.8	3.8	16
15	M	20	- ve	- ve	152	4.7	14	16	0.5	4.2	10
16	M	51	+ ve	- ve	254	7.6	36	27	1.3	3.3	19
17	F	28	+ ve	+ ve	171	5.2	76	71	1.2	3.7	16
18	F	46	- ve	- ve	176	5.3	23	27	0.5	3.9	12
19	F	36	- ve	- ve	151	4.4	23	21	0.4	4.1	11
20	M	45	- ve	- ve	146	4.4	17	14	0.1	4.2	12
21	F	38	- ve	- ve	207	6.3	21	28	0.4	3.9	13
22	M	52	- ve	- ve	247	7.4	15	35	0.2	4.0	12
23	M	19	- ve	- ve	183	5.4	27	12	0.3	4.3	13
24	F	24	- ve	- ve	205	6.2	17	14	0.7	4.5	13
25	F	52	- ve	- ve	208	6.4	30	14	0.75	3.9	14
26	M	50	- ve	- ve	244	7.3	11	13	0.82	4.1	14
27	F	33	- ve	- ve	161	4.7	15	20	0.2	3.8	11

Table 6: Laboratory data for group III (Mean & S.D.):

	Variable	Mean	S.D	Minimum	Maximum
1	Age	33.07	11.93	18	52
2	Urea	179.66	51.53	79	256
3	Creatinine	5.42	1.5	2.2	7.8
4	SGOT	28.2	14.7	11	76
5	SGPT	29.2	16.1	12	71
6	Bilirubin	0.72	0.38	0.1	1.4
7	Albumin	3.8	0.4	3.0	4.5
8	Prothrombin time	14.9	4.2	10	25

Table 7: Laboratory data for group II + III (Mean & S.D.):

	Variable	Mean	S.D	Minimum	Maximum
1	Age	37.8	11.5	18	55
2	Urea	163.8	55.6	65	257
3	Creatinine	4.8	1.6	2	7.8
4	SGOT	38.1	20.2	11	95
5	SGPT	38.7	20.4	12	80
6	Bilirubin	0.93	0.36	0.1	1.6
7	Albumin	3.5	0.35	3	4.5
8	Prothrombin time	18	4.4	10	26

- **Comparison between Group I (Control) and Groups II + III (Patients):** (Tables 8, 9) (Figures 1, 2)

Comparison between control group, and the whole patient groups (II & III) showed a highly significant difference in both kidney functions (Urea, Creatinine), and liver functions (SGOT, SGPT, Bilirubin, Prothrombin time), $P < 0.001$.

- **Comparison between Group II and Group III:**
(Table 10, 11) (Figures 1, 2)

Comparison between group (II patients with history of blood transfusion) and group III (patients without history of blood transfusion), showed a significant difference in kidney functions and in SGOT, SGPT.

And showed a highly significant difference in Bilirubin, Albumin and Prothrombin time.

- **Comparison between Group I and Group II as regard liver functions:** (Table 12) (Figure 2)

Comparison between Group I (Control) and Group II (patients with history of blood transfusion), showed a highly significant difference in the liver functions (SGOT, SGPT, Bilirubin, Albumin, Prothrombin time).

- **Comparison between Group I and Group II as regard liver functions:** (Table 13) (Figure 2)

It showed a significant difference in SGOT, SGPT, Bilirubin. And showed an insignificant difference in Albumin and Prothrombin time.

Table 8 & 9: Comparison between Group I (Control) and Groups II, III (Cases) as regards:

I- Renal function: (Table 8)

Variable	Group I		Group II + III		T	P
	Mean	S.D	Mean	S.D		
Urea	30.49	7.6	163.8	55.6	15.9	< 0.001
Creatinine	0.88	0.24	4.89	1.68	15.9	< 0.001

II- Liver function: (Table 9)

Variable	Group I		Group II + III		T	P
	Mean	S.D	Mean	S.D		
SGOT	20.2	7.1	38.1	20.2	5.75	< 0.001
SGPT	20.4	8.2	38.7	20.4	5.73	< 0.001
Bilirubin	0.56	0.32	0.93	0.36	5.86	< 0.001
Albumin	3.9	0.29	3.5	0.35	6.41	< 0.001
Prothrombin T.	13.5	3.2	18	4.4	6.07	< 0.001

Probability = (P).

P < 0.05 : Significant.

P < 0.001 : Highly significant.

P > 0.05 : Insignificant.

Table 10 & 11: Comparison between Group II and Group III as regards:

I- Renal function: (Table 10)

Variable	Group II		Group III		T	P
	Mean	S.D	Mean	S.D		
Urea	157	56.28	179.6	51.53	1.79	< 0.05
Creatinine	4.65	1.66	5.42	1.59	2.03	< 0.05

II- Liver function: (Table 11)

Variable	Group II		Group III		T	P
	Mean	S.D	Mean	S.D		
SGOT	42.39	20.95	28.29	14.76	3.17	< 0.01
SGPT	42.76	20.85	29.2	16.1	3.0	< 0.01
Bilirubin	1.03	0.3	0.72	0.38	4.05	< 0.001
Albumin	3.37	0.23	3.81	0.4	6.4	< 0.001
Prothrombin T.	19.34	3.83	14.96	4.21	4.82	< 0.001

P < 0.05 : Significant.

P < 0.001 : Highly significant.

P > 0.05 : Insignificant.

Table 12: Comparison between Group I and Group II as regards:**II- Liver function: (Table 12)**

Variable	Group I		Group II		T	P
	Mean	S.D	Mean	S.D		
SGOT	20.2	7.18	42.39	20.95	6.81	< 0.001
SGPT	20.48	8.25	42.76	20.85	6.78	< 0.001
Bilirubin	0.56	0.32	1.03	0.30	7.55	< 0.001
Albumin	3.9	0.29	3.37	0.23	10.25	< 0.001
Prothrombin T.	13.51	3.26	19.34	3.83	8.28	< 0.001

Table 13: Comparison between Group I and Group III as regards liver function:

Variable	Group I		Group III		T	P
	Mean	S.D	Mean	S.D		
SGOT	20.2	7.18	28.29	14.76	3.12	< 0.01
SGPT	20.48	8.25	29.22	16.15	3.03	< 0.01
Bilirubin	0.56	0.32	0.72	0.38	1.85	< 0.05
Albumin	3.9	0.29	3.81	0.40	1.08	> 0.05
Prothrombin T.	13.51	3.26	14.96	4.21	1.63	> 0.05

- P < 0.05: Significant.
- P < 0.001: Highly significant.
- P > 0.05: Insignificant.

Liver function are markedly affected in group II much more than in group III compared with the control.

CHI Square Test

Table 14: Prevalence of HBsAg in group II & III

Group	HBsAg (+ ve)	HBsAg (- ve)	Total
II	25	38	63
III	6	21	27
Total	31	59	90

- Chi square (X^2) = 2.55
- $P > 0.05$ (Insignificant)
- The prevalence of HBsAg was higher in group II, yet, the difference was statistically insignificant.

Table 15: Prevalence of HCV in group II & III

Group	HCV (+ ve)	HCV (- ve)	Total
II	52	11	63
III	5	22	27
Total	57	33	90

- Chi square (X^2) = 33.36
- $P < 0.0001$ (H.S.)
- The difference in the prevalence of HCV between group II & III is statistically highly significant.

Table 16: Prevalence of HCV in group I & III

Group	HCV (+ ve)	HCV (- ve)	Total
I	5	40	45
III	5	22	27
Total	10	62	72

- Chi square (X^2) = 0.77
- $P > 0.05$ (Insignificant)
- Prevalence of HCV is higher in group III. Yet, the difference is statistically insignificant.