# RESULTS

The results obtained by this work are represented in the following tables.

***Table (1):*** Clinical data of patients.

| Clinical data | No. | % |
|---|---|---|
| **History of:** | | |
| ▪ Bilharziasis | 7 | 25.93 |
| ▪ Blood transfusion | 8 | 29.63 |
| ▪ Jaundice | 1 | 3.70 |
| ▪ Alcohol intake | 0 | 0 |
| **Symptoms:** | | |
| ▪ Abdominal pain | 19 | 70.37 |
| ▪ Abdominal mass | 10 | 37.04 |
| ▪ Anorexia and malaise. | 8 | 29.63 |
| ▪ Weight loss | 7 | 25.93 |
| ▪ G.I.T bleeding | 1 | 3.70 |
| ▪ Bone aches | 1 | 3.70 |
| **Signs:** | | |
| ▪ Hepatomeglay | 27 | 100.0 |
| ▪ Spleenomegaly | 14 | 51.85 |
| ▪ L.L. oedema | 4 | 14.81 |
| ▪ Ascites | 7 | 25.93 |
| ▪ Jaundice | 4 | 14.81 |

Table (1) shows the clinical data of patient group.

*Fig. (1):* Symptoms among cases.

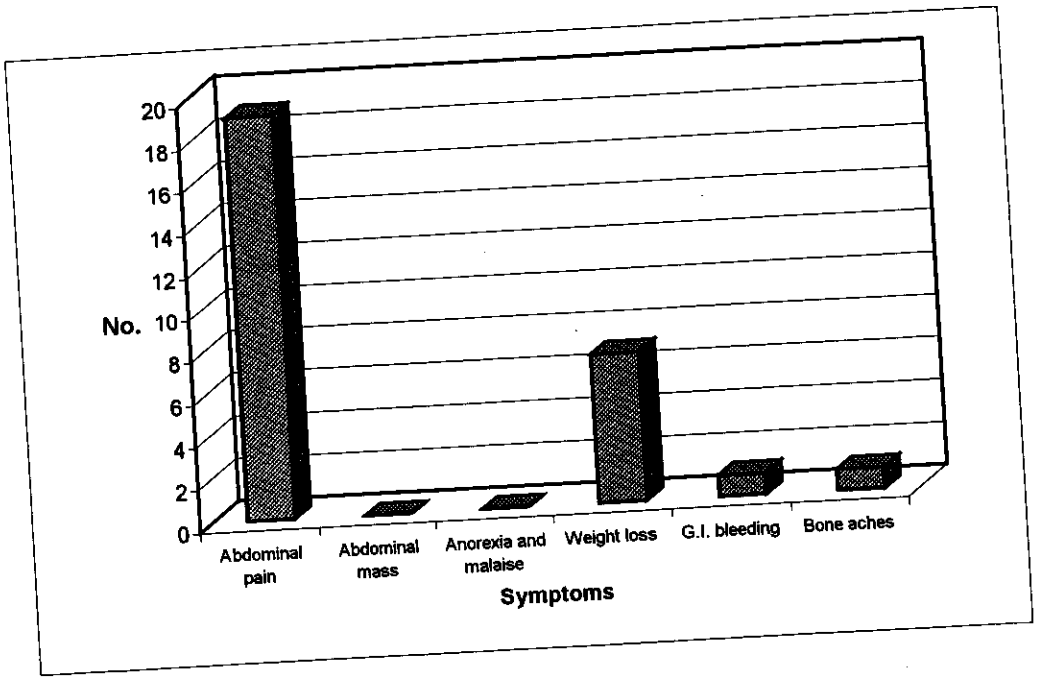



*Fig. (2):* Signs among cases.

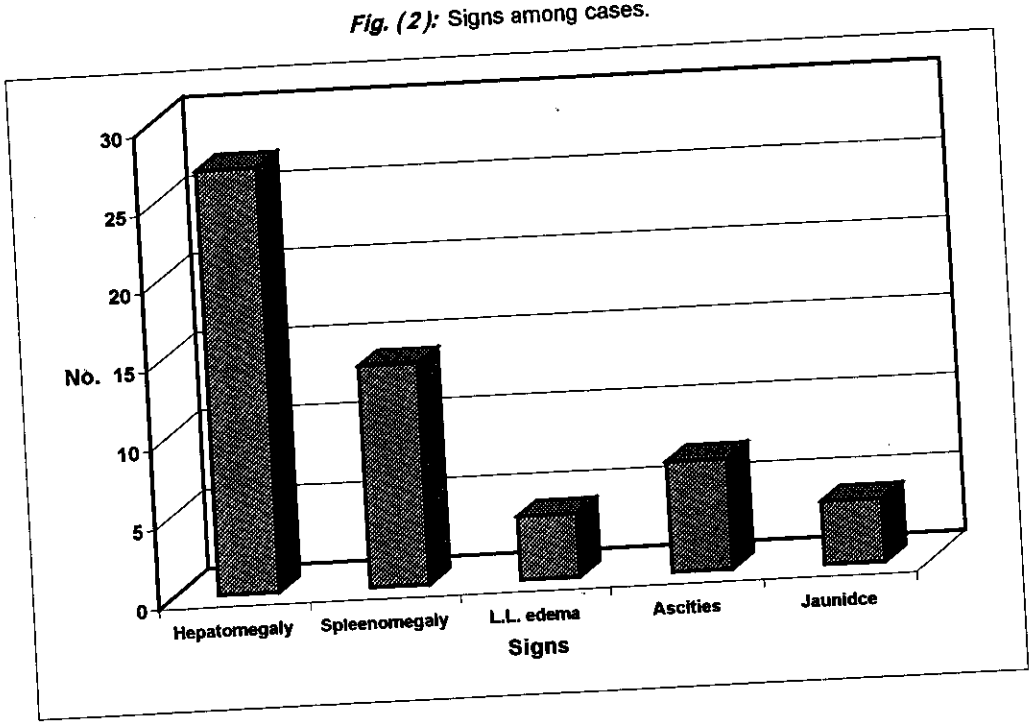


***Table (2):*** Mean of age among the studied groups.

| Age / Studied groups | Range | $\bar{x}$ | ±SD | T | P |
|---|---|---|---|---|---|
| Case (n=27) | 40-75 | 59.26 | ± 8.729 | 1.168 | > 0.05 |
| Control (n= 10) | 37-68 | 52.5 | ±9.131 | | |

Table (2) shows mean of age of patient group in relation to control group. The mean age was 59 year in patient group and 52 year in control group.

***Table (3):*** Sex distribution among the studied groups.

| Sex / Studied gps | M/F ratio | Z | P |
|---|---|---|---|
| Cases (27) | 21/6 | 0.269 | > 0.05 |
| Control (10) | 7/13 | | |

Table (3) shows sex distribution in both patients and control groups. The ratio was 3.5 : 1 (male : female) in patients group and 2.3 :1 (male : female) in control group with statistically insignificant difference.

*Fig. (3):* Mean age among studied groups.

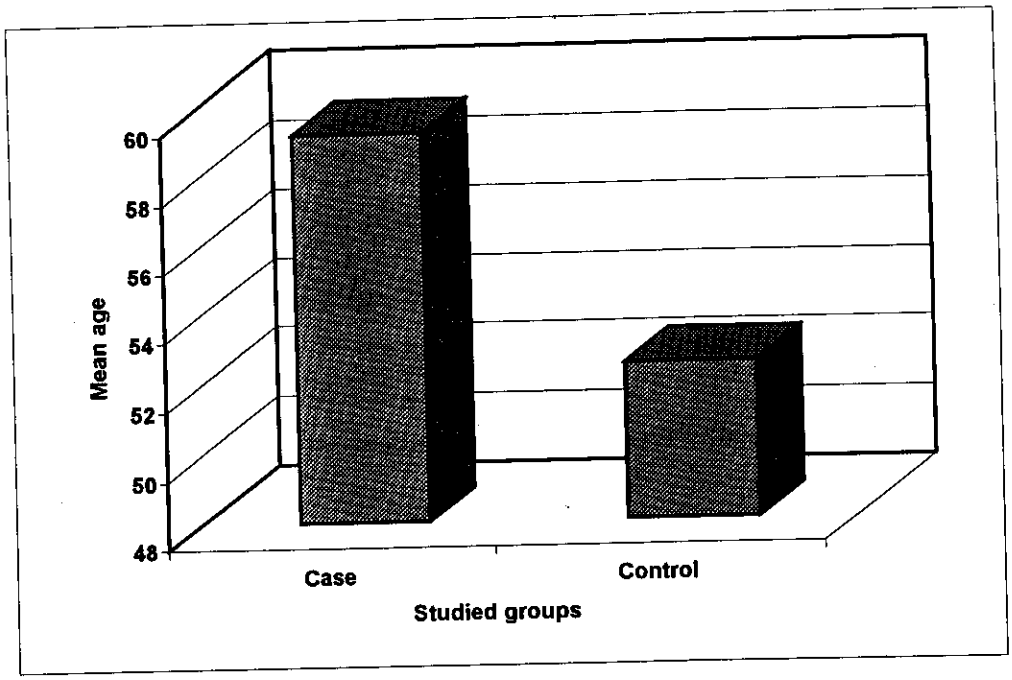



*Fig. (4):* Sex distribution among studied groups.

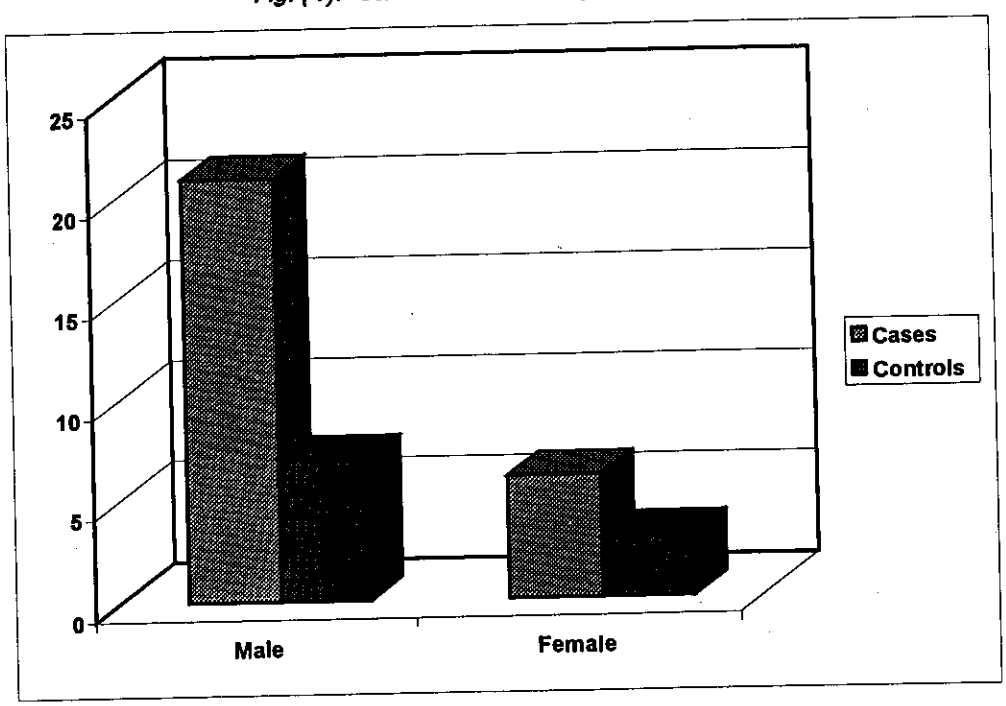


***Table (4):*** Mean age of studied groups according to sex.

| Age / studied gps | Male ± SD | Female ± SD | t | P |
|---|---|---|---|---|
| Cases | 59.429 ± 8.341 | 58.667 ± 6.996 | 0.225 | > 0.05 |
| Controls | 53.0 ± 12.897 (n = 7) | 51.0 ± 8.286 (n = 3) | 0.556 | > 0.05 |

Table (4) shows mean age of studied group according to sex with statistically insignificant difference between males and females in both studied groups.

*Fig. (5):* Mean age of studied groups according to sex.

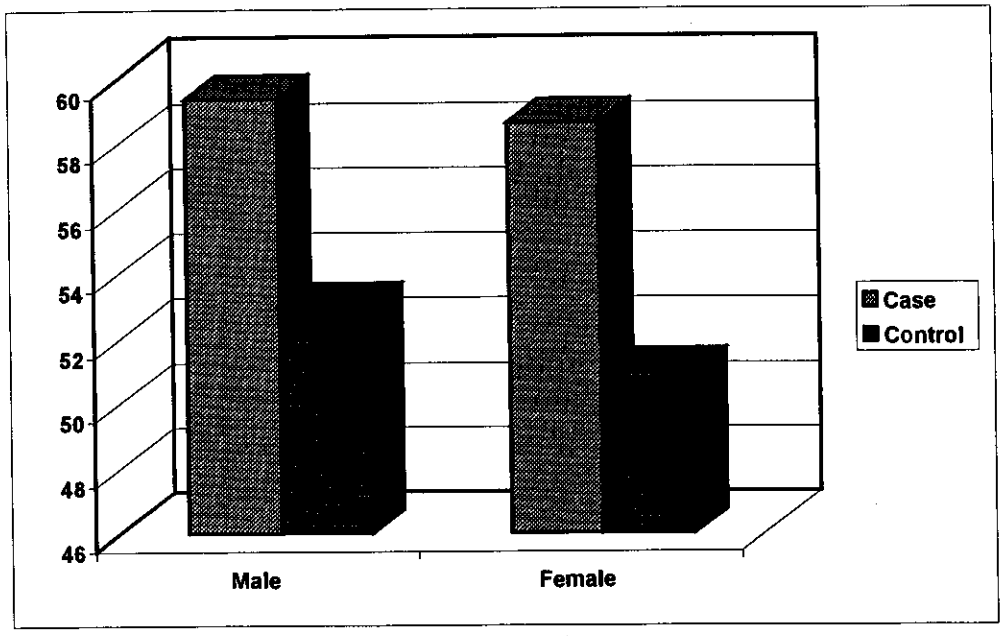


***Table (5):*** Distribution of studied cases according to tumour pattern, site and grading.

| Variables \ Tumour | Present | | Absent | | Z | P |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | | |
| **Pattern (by U/S or C.T.)** | | | | | | |
| ▪ Solitary mass | 20 | 74.07 | 7 | 25.93 | 2.501 | < 0.05 |
| ▪ Multiple focal | 7 | 25.93 | 20 | 74.07 | 2.501 | < 0.05 |
| **Site:** | | | | | | |
| ▪ Rt. Lobe. | 17 | 62.96 | 10 | 37.04 | 1.347 | >0.05 |
| ▪ Lt. Lobe. | 7 | 25.93 | 20 | 74.07 | 2.501 | < 0.05 |
| ▪ Rt. & Lt. Lobe. | 3 | 11.11 | 24 | 88.89 | 4.042 | < 0.05 |
| **Grading:** | | | | | | |
| ▪ I | 4 | 14.81 | 23 | 85.19 | 3.658 | < 0.05 |
| ▪ II | 20 | 74.07 | 7 | 25.93 | 2.501 | < 0.05 |
| ▪ III | 3 | 11.11 | 24 | 88.89 | 4.042 | < 0.05 |

In table (5) the abdominal U/S and/or CT examination of the patients revealed that most patients presented with solitary mass and the lesion was in right lobe in most patients.

Tumour grading as ensured by liver biopsy was grade II in most patients.

*Fig. (6):* Distribution of studied cases according to garding.

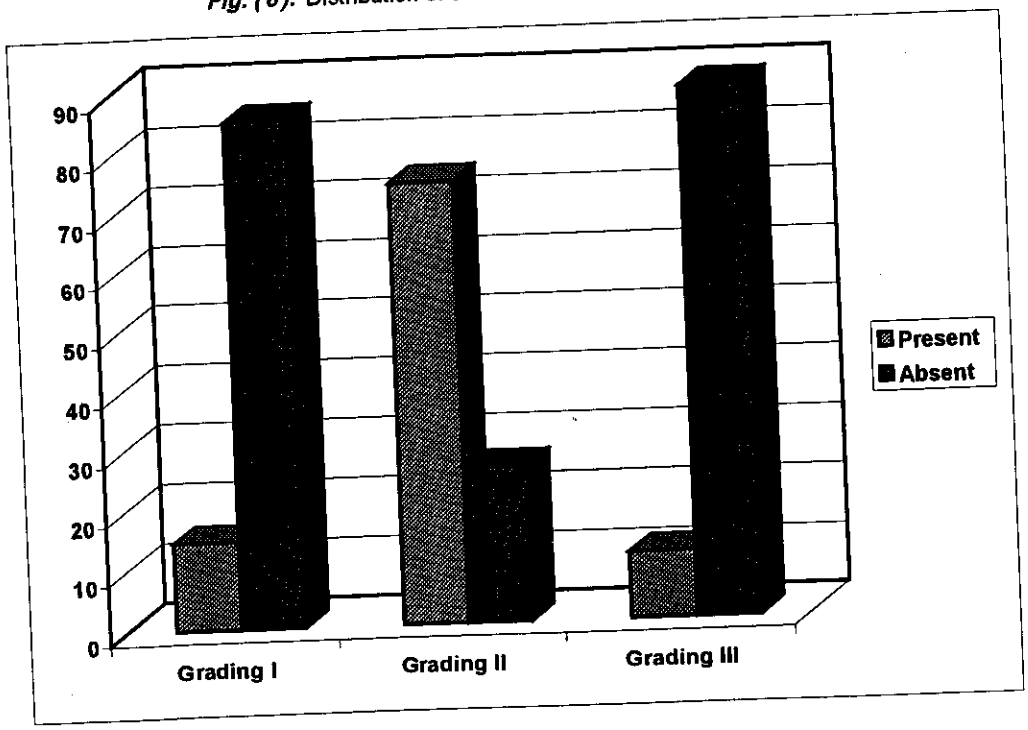



*Fig. (7):* Distribution of studied cases according to tumour pattern and site.

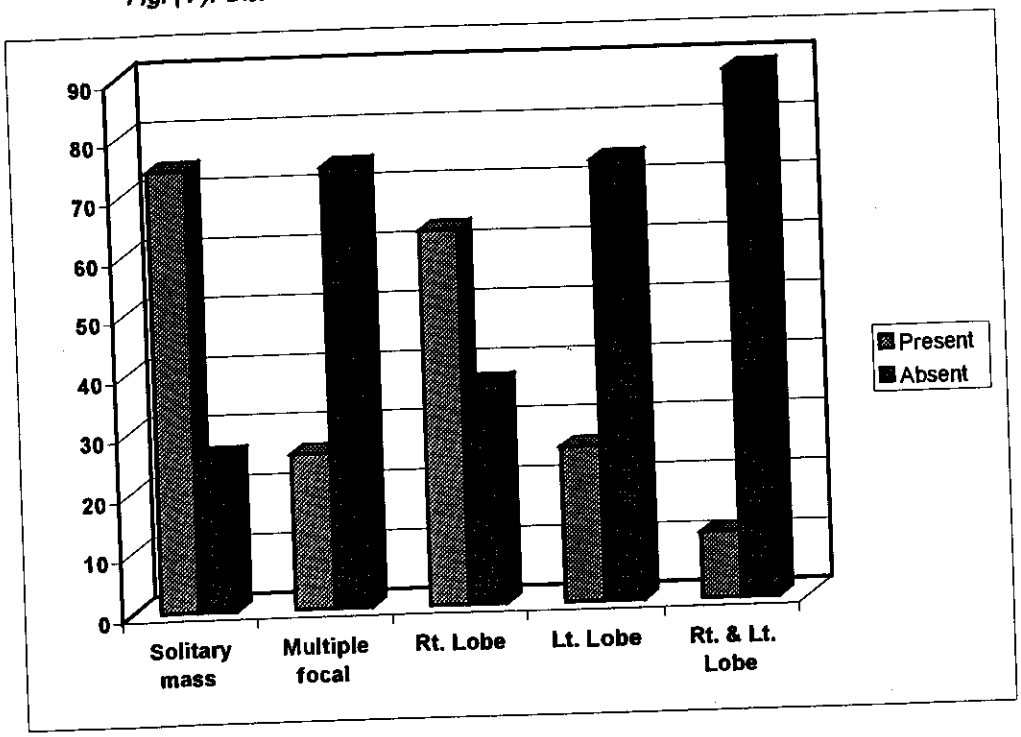


***Table (6):*** Distribution of studied cases according to HBsAg, HCVAb and liver cirrhosis.

| Variables | Present | | Absent | | Z | P |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | | |
| HbsAg | 6 | 22.22 | 21 | 77.78 | 2.887 | < 0.05 |
| HCVAb | 19 | 70.37 | 8 | 29.63 | 2.117 | < 0.05 |
| Liver cirrhosis | 18 | 66.67 | 9 | 33.33 | 1.732 | > 0.05 |

Table (6) shows distribution of studied cases according to seropositivity of HBsAg and HCVAb with statistically significant difference as regard HBsAg and HCVAb and statistically insignificant difference as regard liver cirrhosis.

*Fig. (8):* Distribution of studied cases according to HBsAg, HCVAb and liver cirrhosis.

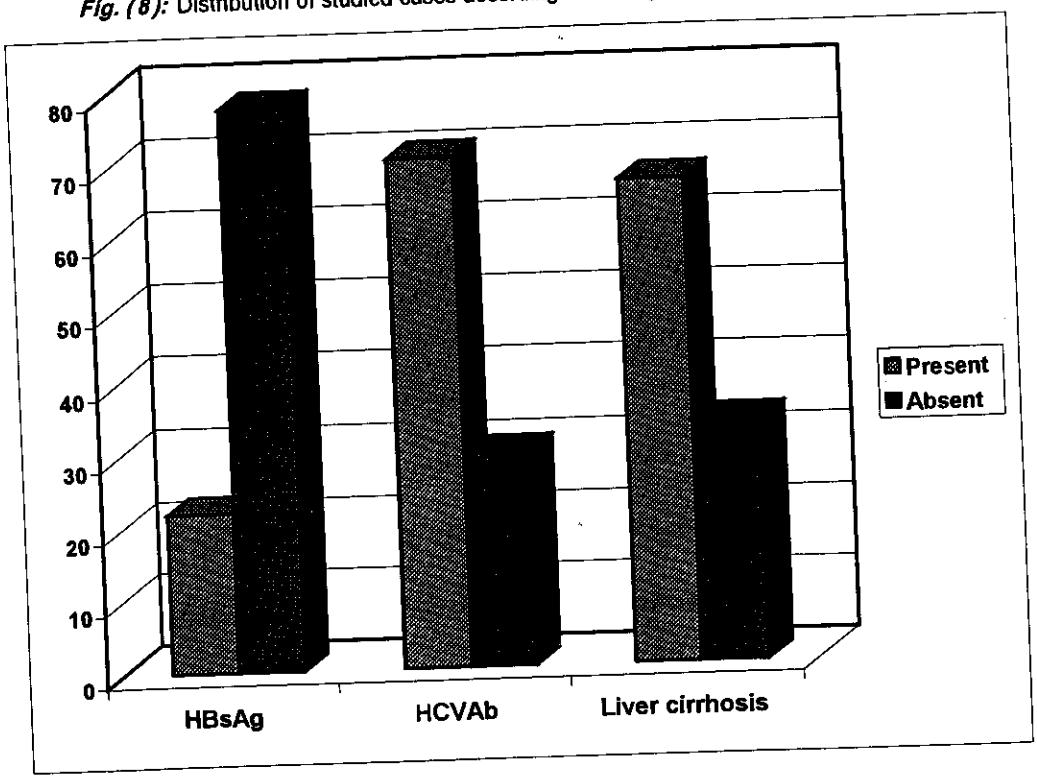


***Table (7):*** Mean of (R.B.Cs., Hb, T.L.C & Platel) among the studied groups.

| Studied gp / Variables | Case $\bar{x} \pm$ SD | Controls $\bar{x} \pm$ SD | t | P |
|---|---|---|---|---|
| R.B.Cs. ($10^{}$ /l) | 4.722 ± 0.744 | 5.25 ± 0.669 | 2.067 | < 0.05 |
| Hb (g/dl) | 13.222 ± 2.368 | 14.47 ± 0.481 | 2.598 | < 0.05 |
| T.L.C. (10 /l) | 8.489 ± 2.439 | 6.73 ± 1.311 | 2.809 | < 0.05 |
| Platelets ($10^{}$ /l) | 244.185 ±109.021 | 267.4± 35.164 | 0.978 | > 0.05 |

Table (16) shows mean of RBCs count in patient group which was slightly significantly lower than in control group, mean of Hb value in patient group was slightly significantly lower than in control group, mean of T.L.C. which was slightly significantly higher in patient group, and the platelet count in patients was insignificantly different from control group.

*Fig. (9):* Mean of (R.B.Cs., Hb and TLC) among the studied groups.

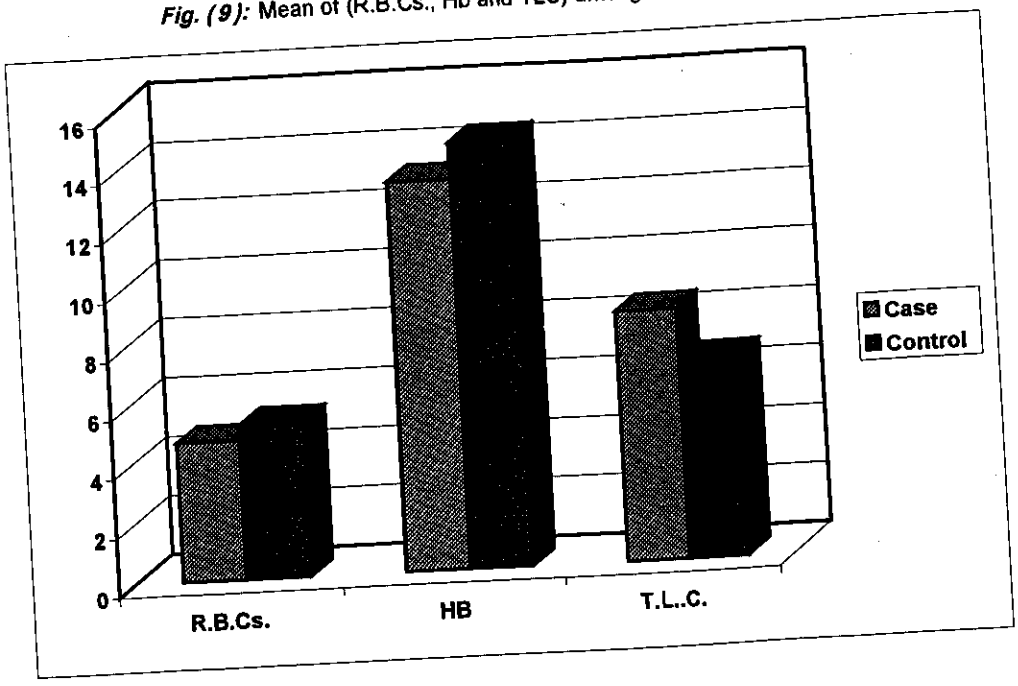



*Fig. (10):* Mean of platelets among the studied groups.

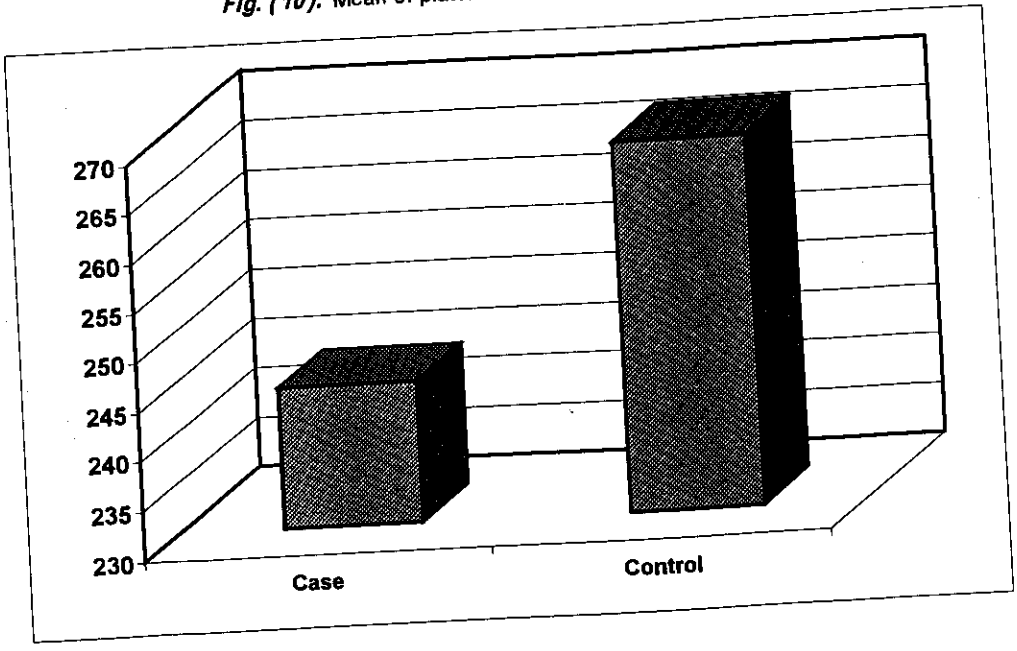


***Table (8):*** Mean of (ALT, AST, ALK. Phosph. and bilirubin) among the studied groups.

| Studied gp / Variables | Case — ± SE | Controls — ± SE | t | P |
|---|---|---|---|---|
| ALT (Iu/l) | 88.852 ± 15.906 | 21.58± 3.583 | 4.176 | < 0.001 |
| AST (Iu/l) | 90.111 ±12.110 | 20.73 ± 2.074 | 5.647 | < 0.001 |
| ALK. Phosph. (u/l) | 396.222± 45.653 | 124.55 ± 13.228 | 5.716 | < 0.001 |
| Biliburin (mg/dl) | 1.499 ± 0.486 | 0.27 ± 0.049 | 3.004 | < 0.01 |

Table (8) shows mean of (ALT, AST, Alk. Ph., and bilirubin) among the studied group which was significantly higher in patient group in comparison to control group.

*Fig. (11):* Mean of ALT, AST and Alk. Phosph. among the studied groups.

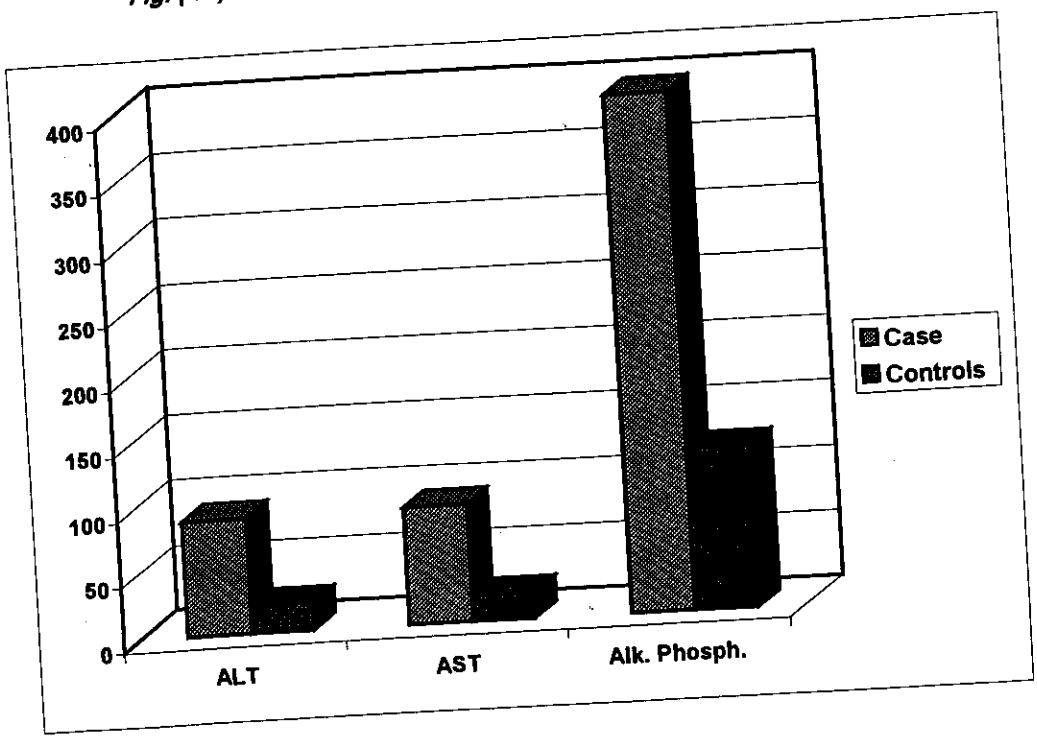


***Table (9):*** Mean of (AFP, GM-CSF and IL-8) among the studied groups.

| Studied gp / Variables | Case — ± SE | Controls — ± SE | t | P |
|---|---|---|---|---|
| AFP (ng/ml) | 284.593 ± 78.189 | 4.05 ± 0.231 | 3.588 | < 0.01 |
| GM-CSF (pg/ml) | 9.88 ± 0.217 | 8.975 ± 0.235 | 2.826 | < 0.01 |
| IL-8 (pg/ml) | 116.495 ± 13.407 | 0.0 ± 0.0 | 8.710 | < 0.001 |

Table (9) shows mean of (AFP, GM-CSF and IL-8) among the studied groups which was significantly higher in patient group in comparison to control group.

*Fig. (12):* Mean of GM-CSF and IL-8 among the studied groups.

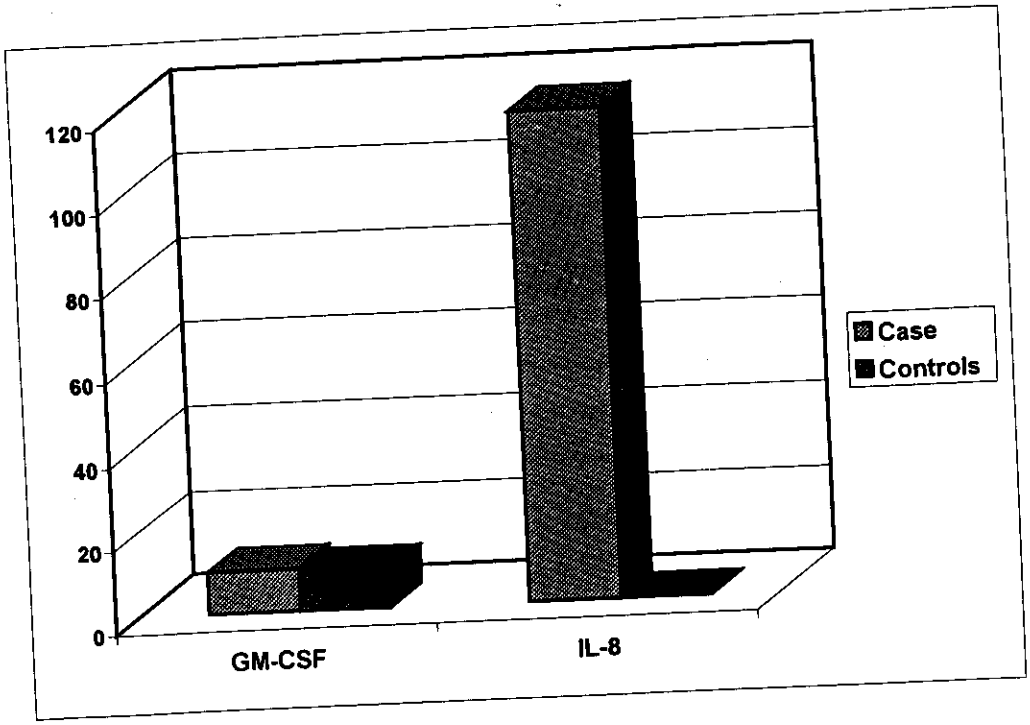
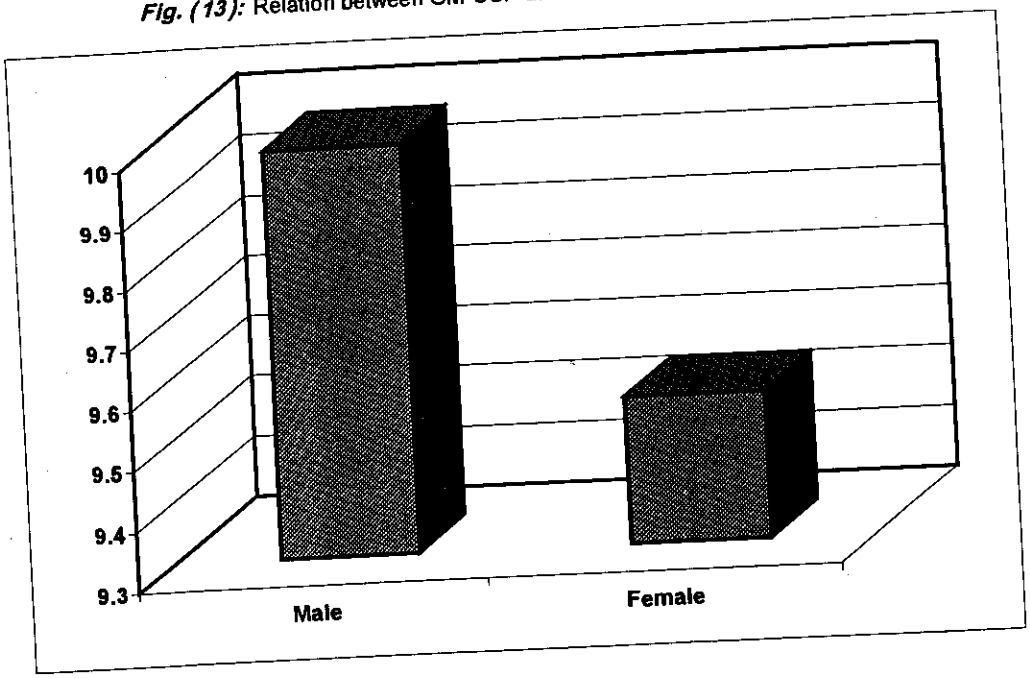


***Table (10):*** Relation between GM-CSF and other variables among cases.

| GM-CSF / other variables | $\bar{x}$ (Pg/ml) | ± SD | t | P |
|---|---|---|---|---|
| **Sex:** | | | | |
| • Male | 9.976 | ± 0.441 | 1.57 | > 0.05 |
| • Female | 9.543 | ± 0.644 | | |
| **History of Bilh.:** | | | | |
| • +ve | 10.229 | ± 1.386 | 0.799 | > 0.05 |
| • -ve | 9.758 | ± 1.212 | | |
| **History of blood transf:** | | | | |
| • +ve | 10.071 | ± 0.848 | 0.704 | > 0.05 |
| • -ve | 9.813 | ± 0.796 | | |
| **Liver cirrhosis:** | | | | |
| • +ve | 9.976 | ± 1.133 | 0.601 | > 0.05 |
| • - ve | 9.689 | ± 1.188 | | |

Table (10) shows that there was slight increase in levels of GM-CSF among male patients more than females also there was an increase in its levels among patients with history of bilharsiasis, blood transfusion and liver cirrhosis but these increase was statistically insignificant.

*Fig. (13):* Relation between GM-CSF and other variables among cases.



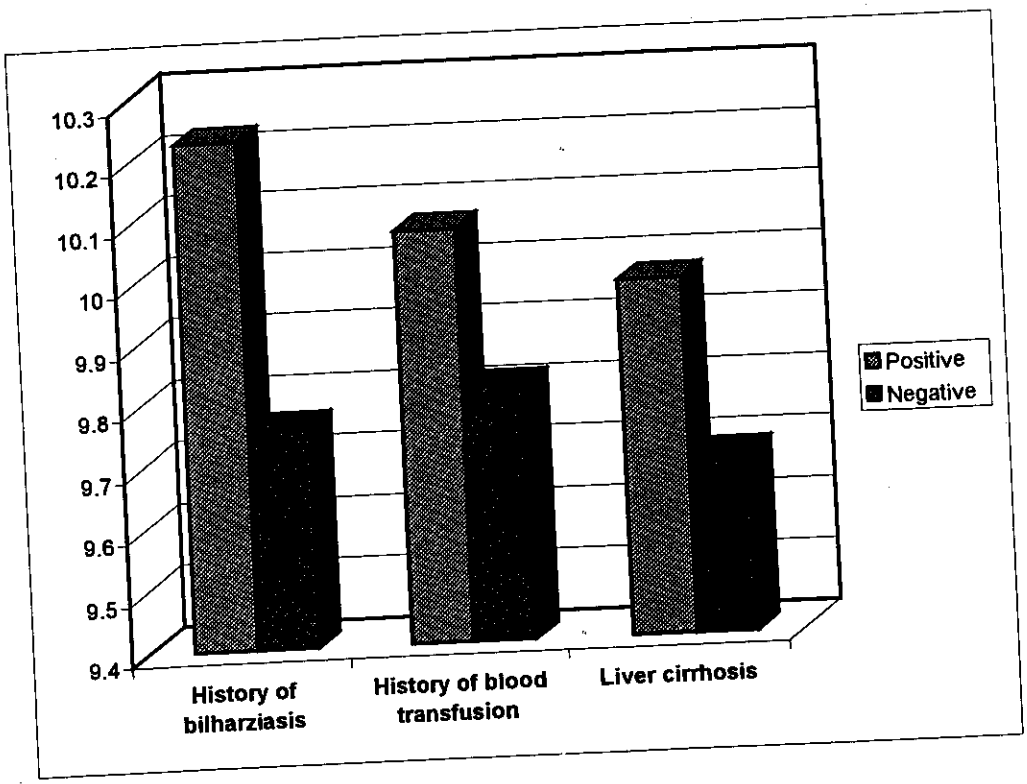



***Table (11):*** Relation between GM-CSF and other variables among cases.

| GM-CSF / other variables | $\bar{x}$ (pg/ml) | ± SD | t | P |
|---|---|---|---|---|
| **HBsAg:** | | | | |
| • +ve | 9.567 | ± 1.218 | 0.724 | > 0.05 |
| • -ve | 9.969 | ± 1.135 | | |
| **HCVAb:** | | | | |
| • +ve | 9.856 | ± 1.115 | 0.169 | > 0.05 |
| • -ve | 9.938 | ± 1.159 | | |
| **Tumour grading:** | | | | |
| • I | 9.725 | ± 1.239 | | |
| • II | 9.923 | ± 1.315 | 1.341 | > 0.05 |
| • III | 9.80 | ± 1.808 | | |
| **Tumour site:** | | | | |
| • Right lobe. | 9.727 | ± 0.785 | | |
| • Left lobe. | 10.157 | ± 0.883 | 1.266 | > 0.05 |
| • Both | 10.10 | ± 1.453 | | |

In table (11) GM-CSF was more increased in patients with grade II HCC and patients with left lobe lesion but this increase was insignificant. Also there was insignificant increase in serum level of GM-CSF in HBsAg and HCV Ab -ve patients more than +ve patients.

*Fig. (14):* Relation between GM-CSF and other variables among cases.

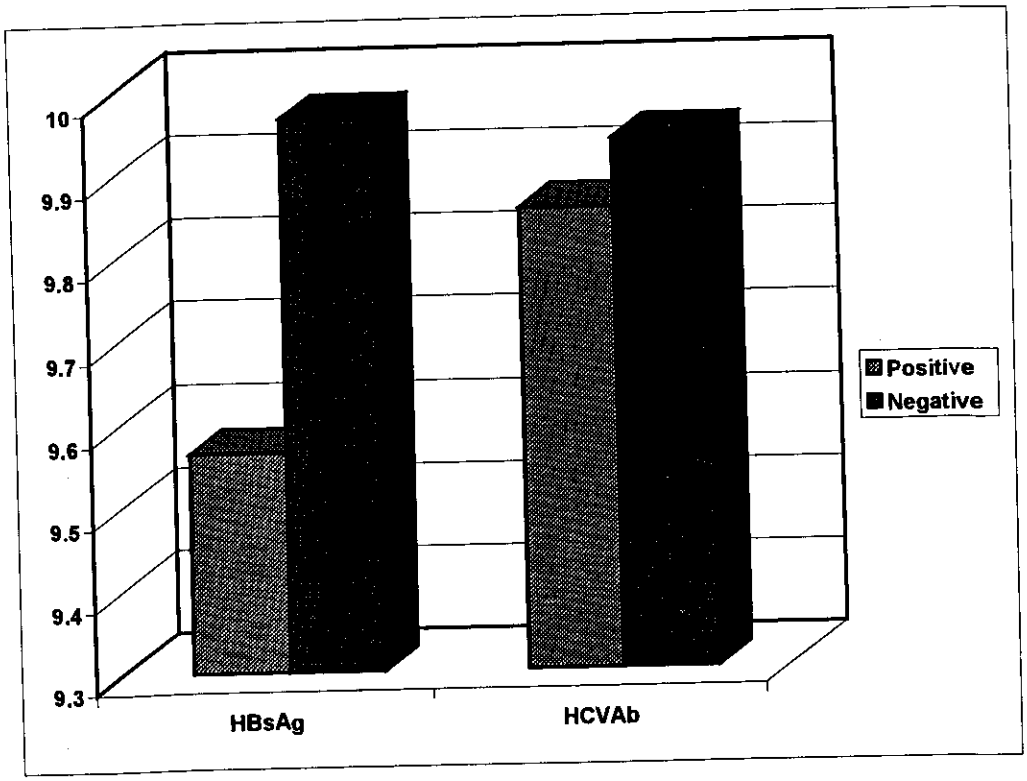
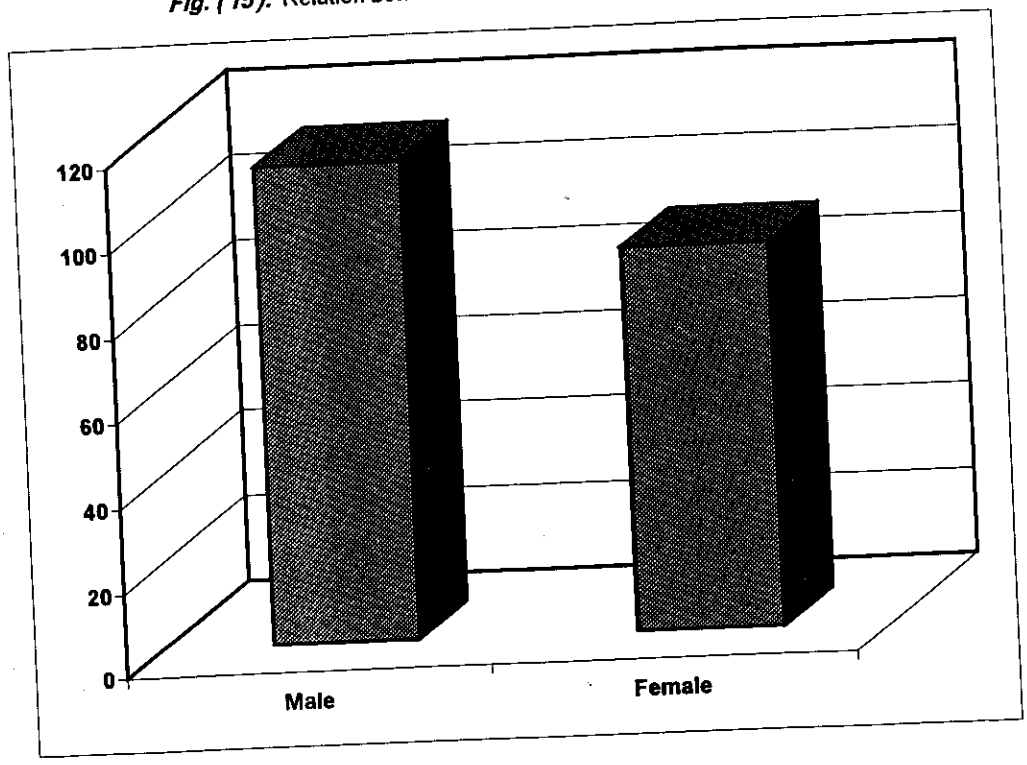


***Table (12):*** Relation between IL-8 and other variables among cases.

| IL/8 / other variables | $\bar{x}$ (pg/ml) | ± SD | t | P |
|---|---|---|---|---|
| **Sex:** | | | | |
| • Male | 112.461 | + 15.140 | 0.449 | > 0.05 |
| • Female | 90.122 | ± 47.371 | | |
| **History of Bilh.:** | | | | |
| • +ve | 121.628 | ± 28.516 | 0.578 | > 0.05 |
| • -ve | 102.551 | ± 17.025 | | |
| **History of blood transf:** | | | | |
| • +ve | 120.06 | + 15.101 | 0.902 | > 0.05 |
| • -ve | 103.099 | ± 9.891 | | |
| **Liver cirrhosis:** | | | | |
| • +ve | 140.778 | ± 15.236 | 4.568 | < 0.001 |
| • - ve | 67.926 | ± 4.712 | | |

In table (12) IL-8 was increased in male patients more than female patients also IL-8 was increased in patients with history of bilharsiasis and blood transfusion but this increase was statistically insignificant, however there was an increase in level of IL-8 among patients with liver cirrhosis which was highly significant.

*Fig. (15):* Relation between IL-8 and other variables among cases.



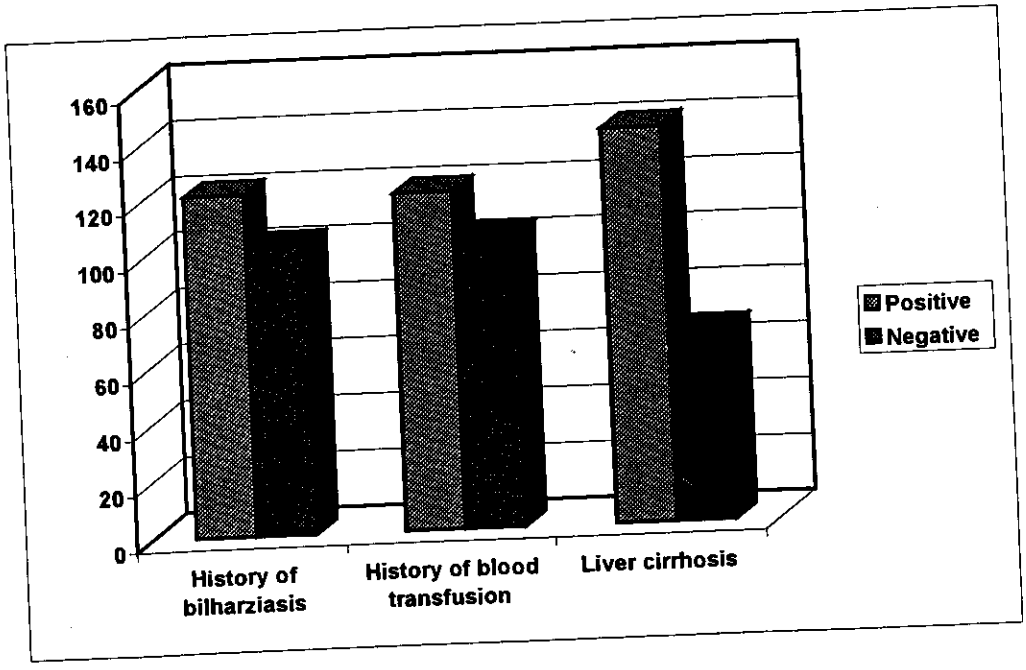



***Table (13):*** Relation between IL-8 and other variables among cases.

| IL-8 / other variables | $\bar{x}$ (pg/ml) | ± SD | t | P |
|---|---|---|---|---|
| **HBsAg:** | | | | |
| • +ve | 160.7893 | ± 41.844 | 1.279 | > 0.05 |
| • -ve | 103.839 | ± 13.561 | | |
| **HCVAb:** | | | | |
| • +ve | 145.593 | ± 14.098 | 5.495 | < 0.001 |
| • -ve | 47.385 | ± 10.975 | | |
| **Tumour grading:** | | | | |
| • I | 71.536 | ± 25.821 | | |
| • II | 121.142 | ± 15.055 | 6.581 | < 0.05 |
| • III | 64.477 | ± 35.014 | | |
| **Tumour site:** | | | | |
| • Right lobe. | 122.382 | ± 15.381 | | |
| • Left lobe. | 93.321 | ± 19.550 | 7.092 | < 0.05 |
| • Both | 56.225 | ± 28.245 | | |

Table (13) shows an increase in level of IL-8 in patients with +ve HBsAg and HCV Ab, this increase was insignificant in patients with +ve HBsAg and highly significant in patients with +ve HCV Ab.

*Fig. (16):* Relation between IL-8 and other variables among cases.

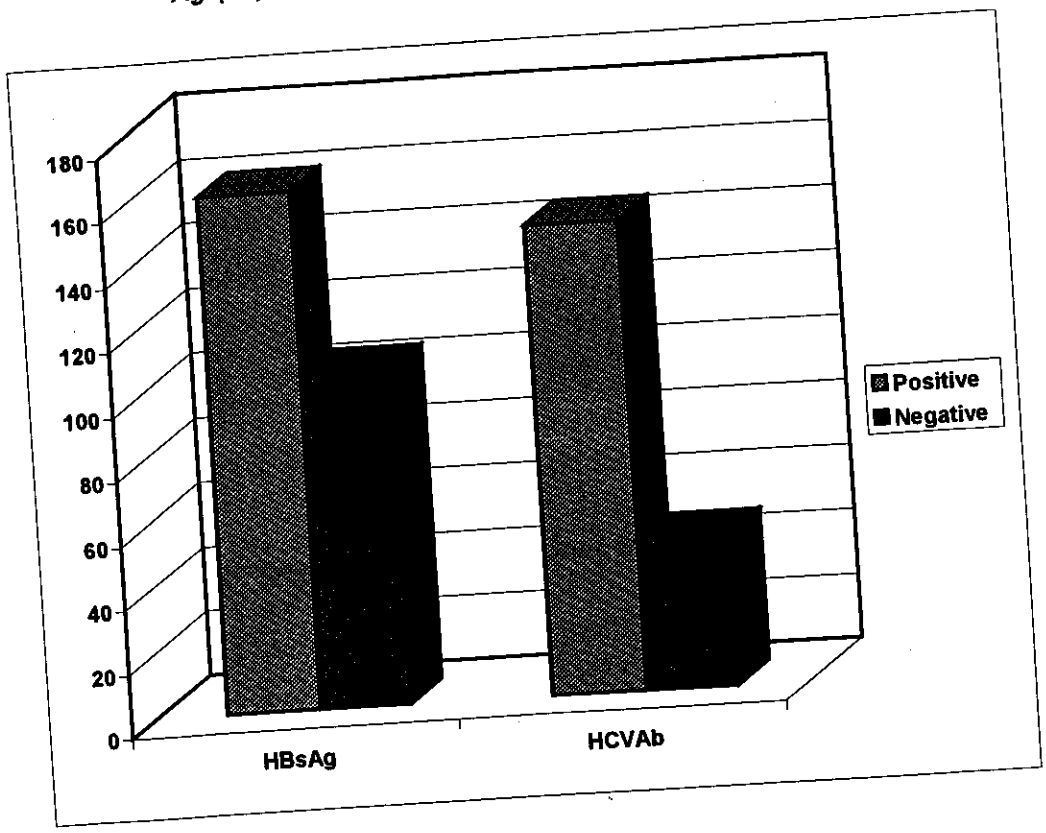


***Table (14):*** Correlation between liver enzymes, biliburin, AFP and GM-CSF with IL-8 in patients group.

| | IL-8 | | r | t |
|---|---|---|---|---|
| | — **116.495** | SE ± 13.407 | | |
| ALT | 88.852 | ± 15.906 | - 0.19 | - 0.95 |
| AST | 90.111 | ± 12.110 | 0.23 | 1.15 |
| Alk. Ph. | 396.222 | ± 45.653 | 0.04 | 0.20 |
| Bilirubin | 1.499 | ± 0.486 | 0.21 | 1.05 |
| AFP | 284.593 | ± 78.189 | - 0.04 | - 0.20 |
| GM-CSF | 9.88 | ± 0.217 | 0.05 | 0.25 |

In table (14) no significant correlation was found between liver enzymes, biliburin, AFP and GM-CSF with IL-8 in patients group.

*Table (15):* Correlation between liver enzymes, biliburin and AFP with GM-CSF in patients group.

| | GM-CSF | | r-value | t |
|---|---|---|---|---|
| | — | SE | | |
| | 9.88 | ± 0.217 | | |
| ALT | 88.852 | ± 15.906 | 0.06 | 0.07 |
| AST | 90.111 | ± 12.110 | 0.03 | 0.15 |
| Alk. Ph. | 396.222 | ± 45.653 | - 0.35 | - 1.74 |
| Bilirubin | 1.499 | ± 0.486 | - 0.06 | - 0.30 |
| AFP | 284.593 | ± 78.189 | - 0.40 | - 1.97 |

Critical level of correlation coefficient "r" value = 0.3809

In table (15) no significant correlation was found between liver enzymes, biliburin and AFP with GM-CSF in patients group.