RESULTS

All the results of the present study are illustrated in 24 tables and 13 figures, and will be described as follows:

A] Descriptive statistics:

* Liver function tests (LFTs), serum HBV-DNA level, HBeAg/HBeAb, pathologic data and schistosomal finding of all cases are shown in table (1) (in appendix).
* LFTs, DNA level, HBeAg/HBeAb, pathologic data and schistosomal finding of the main groups are shown in tables (2-5) (in appendix)
* LFTs, DNA level, HBeAg/HBeAb, pathologic data and schistosomal finding of the subgroups are shown in tables (6-9) (in appendix)
* Collective data of LFTs and DNA levels showing the mean value ± SD and the range of results of the main groups are illustrated in tables (10-12).
* Collective data of LFTs and DNA levels showing the mean value ± SD of the subgroups are illustrated in tables (13-16).

B. Comparative statistics:

Comparison of LFTs and DNA level between the main groups and subgroups are shown in tables (17-19) & Fig.[1-4].

C. *Correlation statistics:*

Correlation between DNA level and HBeAg/HBeAb positivity among DNA positive groups table (20-24) & Fig. [5-9]

Correlation between DNA level and LFTs among the main groups (Fig. 10-13).

Serum HBV-DNA was positive in 22 of 63 patients (35%). The range was 2.4-82.6 pg/ml with a mean of (29.2 ± 23.26).

Group A (n=3): representing the immune-tolerant stage, showed the highest HBV-DNA levels (table2). Also it showed the youngest age group, but it was not valid for statistical analysis due to the small number of cases (3 cases).

Group B_1 (n=13) representing the typical cases of the immune-elimination stage. Showed HBV-DNA levels with a range of (2.4 -60 pg/ml) and a mean value (24.78 ± 22.96) table (3 and 10). The age was in a range of (24-42) and a mean value (33.2 ± 5.5).

Group B_2 (n=6) representing the atypical cases of group B "suggested pre-core mutant HBV" showed HBV-DNA levels with a range of (6.9 - 31 pg/ml). and a mean

value (24.78 ± 22.96). The age range (28-48 years) with a mean of (35.2 ± 8.95) table (4 and 11).

Subgroup B_{NS} (n=7): representing the non-schistosomal cases of group B_1, showed a HBV-DNA range of (2.4 - 57 pg/ml) with a mean of (24.6 ± 23.1) table (6 and 15).

Subgroup Bs (n=6): representing the schistosomal cases of group B_1, showed a HBV-DNA range of (2.4 - 60 pg/ml) with a mean (25 ± 24.99) table (7 & 16).

- The comparative study between the different main groups and subgroups as regard HBV-DNA level showed non-significant higher levels in subgroup Bs— compared to B_{NS} with a mean of (25.0 ± 24.99) versus (24.57 ± 23.09) ($P > 0.05$) Table (18).

The comparative study between the main groups and subgroups as regard the liver function tests (LFTs), comprising the parameters of liver cell injury "LCI" (serum bilirubin, AST and ALT) and parameters of the synthetic function (ALb. and P%) showed higher levels of all LFTs except P% in group B_2 compared to grou B_1, with no statistical significant difference. Table (17)

Table (18) showed non-significant differences between B_{NS} and Bs subgroups as regard LFTs, with higher levels of AST & ALT in Bs than B_{NS}.

Table (19) Shows significant higher levels of the LCI parameters namely D.B., AST & ALT and lower levels of synthetic function parameters namely ALB & P% in subgroup C_S than D_{NS} ($P < 0.01$).

Analysis of the correlation between the DNA level and the positivity of HBeAg/HBeAb among the different DNA-positive groups (Tables 20-24) and Figures (5-9).

In the DNA-positive groups (A+B), there is a significant correlation between the increase of DNA level and positivity of HBeAg ($P<0.05$) table (20) and Fig (5), and significant correlation between HBeAb positivity and decrease DNA level ($P < 0.01$)Table (21) and fig (6).

Group B_1, shows non significant correlation between DNA level and HBeAg positivity ($P > 0.05$) , but shows significant correlation with HBeAb positivity ($P < 0.05$) Table (22-23) and Fig (7-8).

Group B_2, shows non significant correlation between DNA level and HBeAb positivity ($P > 0.05$) Table (24) & Fig. (9).

Analysis of correlation between DNA level and liver function tests among DNA positive groups showed:

Positive correlation between DNA level and AST and ALT in group B_1 with $r = 0.787$ and 0.479 respectively, but negative correlation between DNA level and P % with $r = -0.635$ in the same group. (Fig. 10-12)

Group B_2 showed negative correlation between DNA level and ALT with $r = -0.936$ Fig. (13)

Table(10): Collective data of " LFTs" and HBV-DNA level of the main group " B1" (n =13)

	TB	DB	AST	ALT	ALP	TP	ALB	P%	DNA
Mean	2.58	1.07	124.31	114.46	101.0	6.65	3.23	62.85	24.78
SD	1.8	0.98	57.63	79.17	36.25	1.197	1.15	13.75	22.96
range	0.6	0.1	40.0	50.0	41.0	4.5	0.8	42.0	2.4
	6.5	2.8	243.0	341.0	157.0	8.3	4.5	90.0	60.0

Table(11): Collective data of " LFTs" and HBV-DNA level of the main group " B2 " (n =6)

	TB	DB	AST	ALT	ALP	TP	ALB	P%	DNA
Mean	2.7	1.07	147.17	126.3	132.3	7.07	3.38	60.66	21.7
SD	1.34	0.71	35.16	47.8	26.6	1.06	1.07	13.98	8.58
range	1.3	0.1	107.0	76.0	105	5.8	2.2	45.0	6.9
	4.9	2.1	185.0	210.0	172.0	8.8	4.7	85.0	31.0

Table (12) Collective data of " LFTs" of the main group"C " (n=41).

	TB	DB	AST	ALT	ALP	TP	ALB	P%
MEAN	0.95	0.146	57.07	44.5	87.61	6.96	3.9	80.22
SD	0.40	0.165	40.6	23.39	27.25	0.63	0.75	11.7
range	0.3	0.0	12.0	11.0	44.0	5.3	1.7	51.0
	2.1	0.7	166.0	129.0	170.0	8.3	5.0	100.0

Table (13): Collective data of " LFTs" of the subgroup"C ns" (non-Schistosomal cases of group C)n=20.

	TB	DB	AST	ALT	ALP	TP	ALB	P%
MEAN	0.89	0.08	39.5	35.7	80.6	6.99	4.2	84.8
SD	0.3	0.09	27.1	14.9	27.9	0.75	0.5	8.7
range	0.3	0.0	12	11	44	5.3	3.1	65
	1.3	0.3	128	74	170	8.3	5.0	100

Table (14): Collective data of " LFTs" of the subgroup"Cs" (Schistosomal cases of group C)n=21.

	TB	DB	AST	ALT	ALP	TP	ALB	P%
MEAN	1.0	0.2	73	52.95	94.3	6.9	3.6	75.8
SD	0.48	0.2	44.67	27.0	25.4	0.51	0.83	12.67
range	0.5	0.0	28	17	54	6.0	1.7	51
	2.1	0.7	166	129	156	8.3	5.0	92

Table(15): Collective data of " LFTs" and HBV-DNA level of the subgroup"Bns" (non-schistosomal cases of group B1) n=7.

	TB	DB	AST	ALT	ALP	TP	ALB	P%	DNA
Mean	2.33	0.87	111.4	88.86	89.7	6.2	3.01	63.0	24.57
SD	2.06	0.9	42	37	40.27	1.3	1.51	19.0	23.1
range	0.6	0.1	41	57	41	4.5	0.8	42	2.4
	6.5	2.2	171	160	157	8.0	4.5	90	57

Table(16): Collective data of " LFTs" and HBV-DNA level of the subgroup"Bs" (schistosomal cases of group B1) n=6.

	TB	DB	AST	ALT	ALP	TP	ALB	P%	DNA
Mean	2.87	1.3	139.3	144.3	114.2	7.18	3.57	62.7	25.0
SD	1.58	1.1	73.2	106.9	28.7	0.87	0.51	4.32	24.99
range	1.5	0.4	40	50	65	6.2	2.7	55	2.4
	5.2	2.8	243	341	148	8.3	4.3	66	60

Table (17) : Comparison of LFTs and HBV-DNA level between groups B1 and B2.

Group		T.B	D.B	AST	ALT	ALP	T.P	ALB	P%	DNA
B1 n = 13	Mean S.D	2.58 1.80	1.07 0.98	124.3 57.60	114.5 79.20	101.0 36.30	6.65 1.20	3.30 1.15	62.85 13.75	24.80 22.96
B2 n = 6	Mean S.D	70.0 1.34	1.07 0.70	147.2 35.20	126.3 47.80	132.0 29.60	7.10 1.06	3.38 1.07	60.7 14.0	21.7 8.60
t		0.16	0.0	1.06	0.40	1.97	0.85	0.15	0.31	0.43
P		>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS

Table(18): Comparison of LFTs and HBV-DNA level between subgroups Bns and Bs.

Group		TB	DB	AST	ALT	ALP	TP	ALB	P%	DNA
Bs n=7	Mean S.D	2.33 2.06	0.87 0.90	111.4 41.99	88.86 36.92	89.71 40.27	6.20 1.30	3.01 1.51	63.0 19.0	24.57 23.09
Bs n=6	Mean S.D	2.87 1.58	1.30 1.10	139.3 73.15	144.3 106.85	114.16 28.67	7.18 0.87	3.57 0.51	62.64 32	25.0 24.99
t		0.521	0.77	0.861	1.295	1.24	1.563	0.85	0.04	0.032
P		>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS	>0.05 NS

Table(19): Comparison of LFTs between subgroups Cns and Cs.

Group		TB	DB	AST	ALT	ALP	TP	ALB	P%
Cns n=20	Mean S.D	0.89 0.30	0.085 0.09	39.5 27.1	35.7 14.9	80.6 27.98	6.99 0.75	4.20 0.50	84.9 8.69
Cs n=21	Mean S.D	1.00 0.48	0.20 0.20	73.0 44.7	52.95 27.00	94.3 25.4	6.94 0.51	3.60 0.83	75.80 12.67
T		0.91	2.48	2.95	2.513	1.64	0.29	2.84	2.70
P		>0.05 NS	<0.01 HS	<0.01 HS	<0.01 HS	>0.05 NS	>0.05 NS	<0.01 HS	<0.01 HS

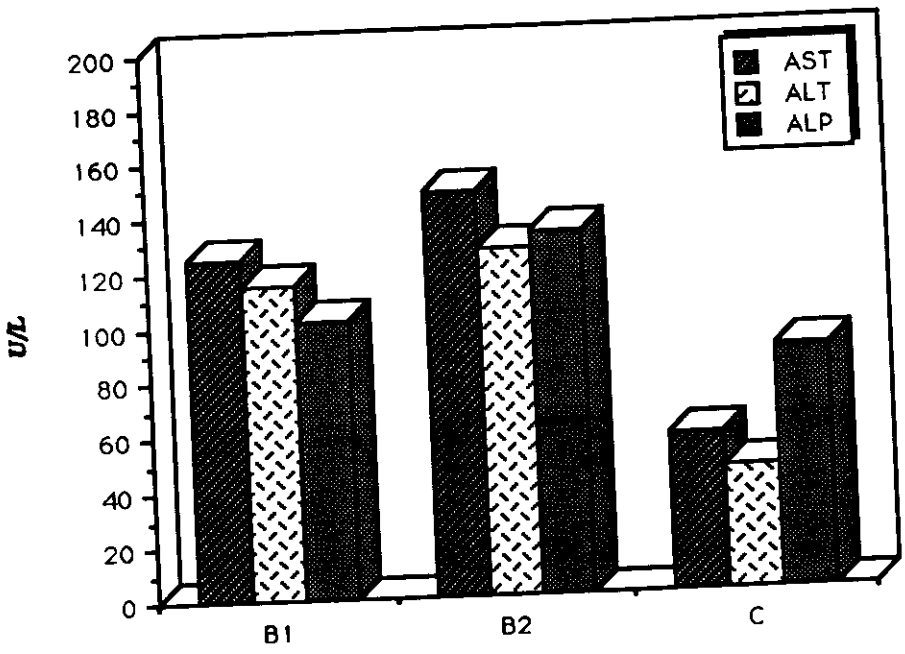


Fig.(1) Comparison of Liver enzyme levels between different groups

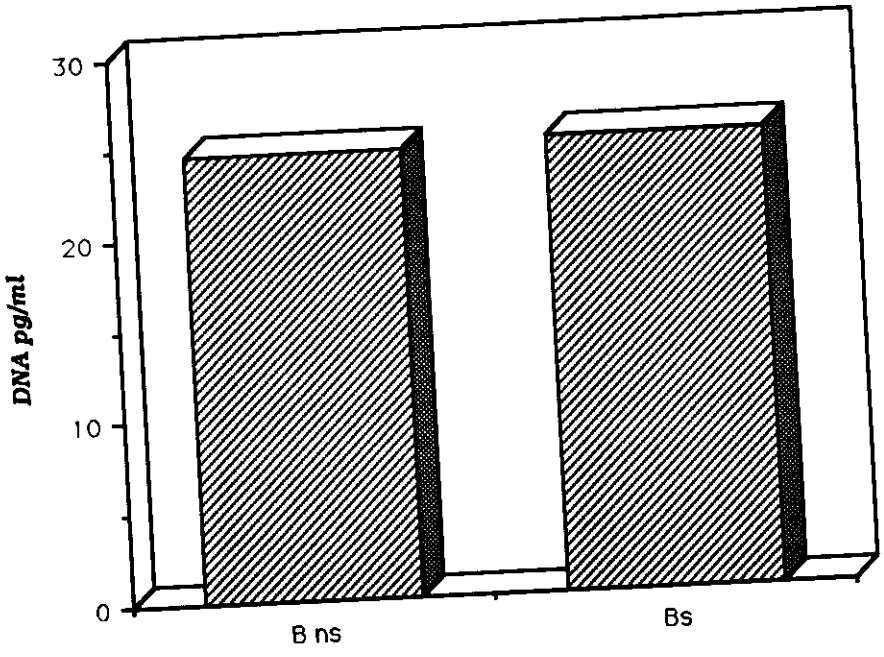


Fig.(2) Comparison of DNA levels between subgroups Bns and Bs

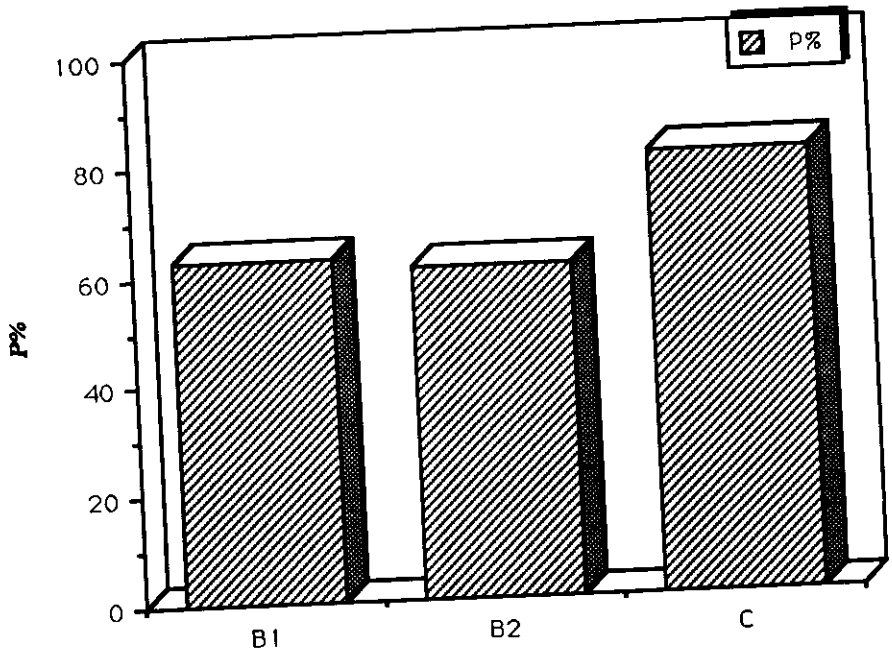


Fig.(3) Comparison of prothrombin Concentration levels between different groups.

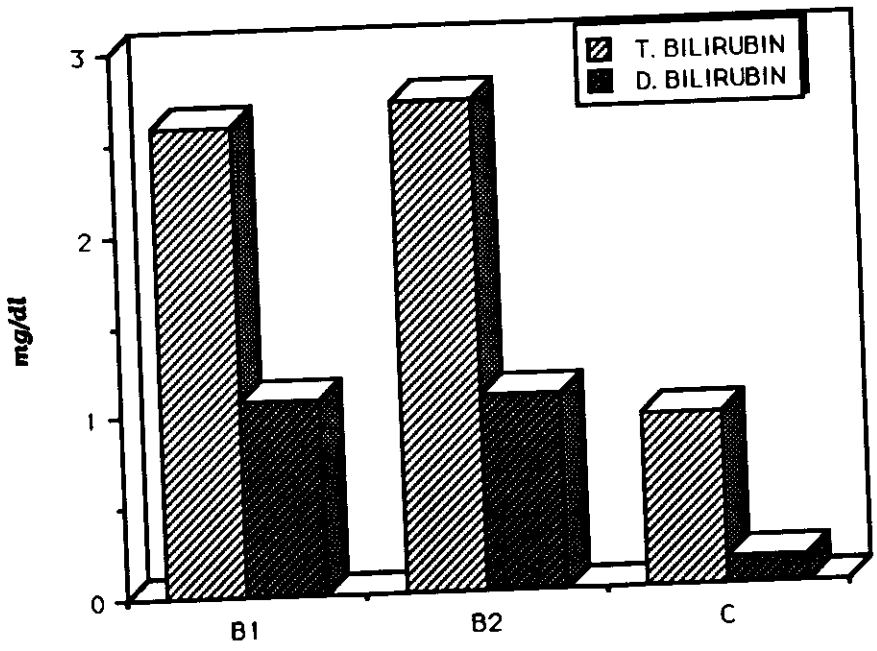


Fig.(4) Comparison of serum bilirubin levels between different groups

Table (20): Correlation study between DNA level and HBeAg positivity among DNA-Positive groups (A+B)

Parameter	Group	DNA level				X^2	P	Sig.
		≤ 29 pg		> 29 pg				
		No	%	No	%			
HBe Ag	+ ve	4	(33)	9	(90)	5.091	< 0.05	S.
	- ve	4	(67)	1	(10)			

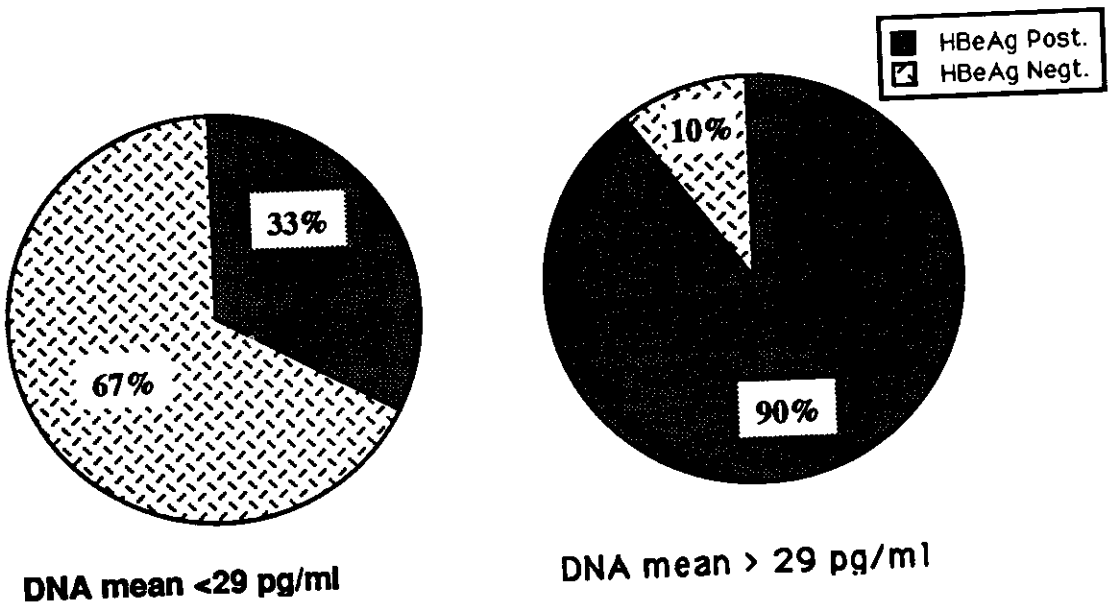


Fig.(5): Correlation between DNA level and HBeAg positivity in the DNA-positive groups (A+B)

The HBeAg positivity increased from 33% to 90% when DNA level increased above the mean value (29 pg/ml).

Table (21): Correlation study between DNA level and HBeAb positivity among DNA-positive groups A+ B.

Parameter	Group	DNA level				X^2	P	Sig.
		≤ 29 pg		> 29 pg				
		No	%	No	%			
HBe Ab	+ ve	8	(67)	0	(0)	7.793	< 0.01	H.S.
	- ve	4	(33)	10	(100)			

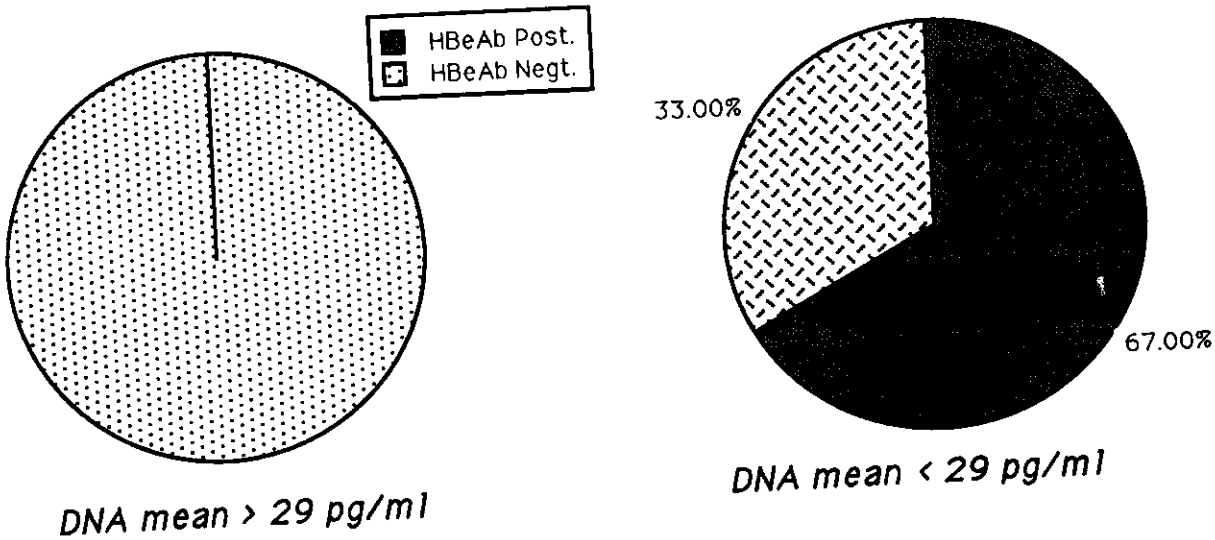


Fig.(6): Correlation between DNA level and HBeAb positivity in the DNA-positive groups (A+B)

HBeAb positivity increased from 0% to 67% when DNA level decreased below the mean value (29 pg/ml)

Table (22): Correlation study between DNA level and HBeAg positivity among DNA-positive group B1.

Parameter	Group	DNA level				X^2	P	Sig.
		≤ 24.7 pg		> 24.7 pg				
		No	%	No	%			
HBe Ab	+ ve	3	(50)	7	(100)	2.169	> 0.05	N.S.
	- ve	3	(50)	0	(0)			

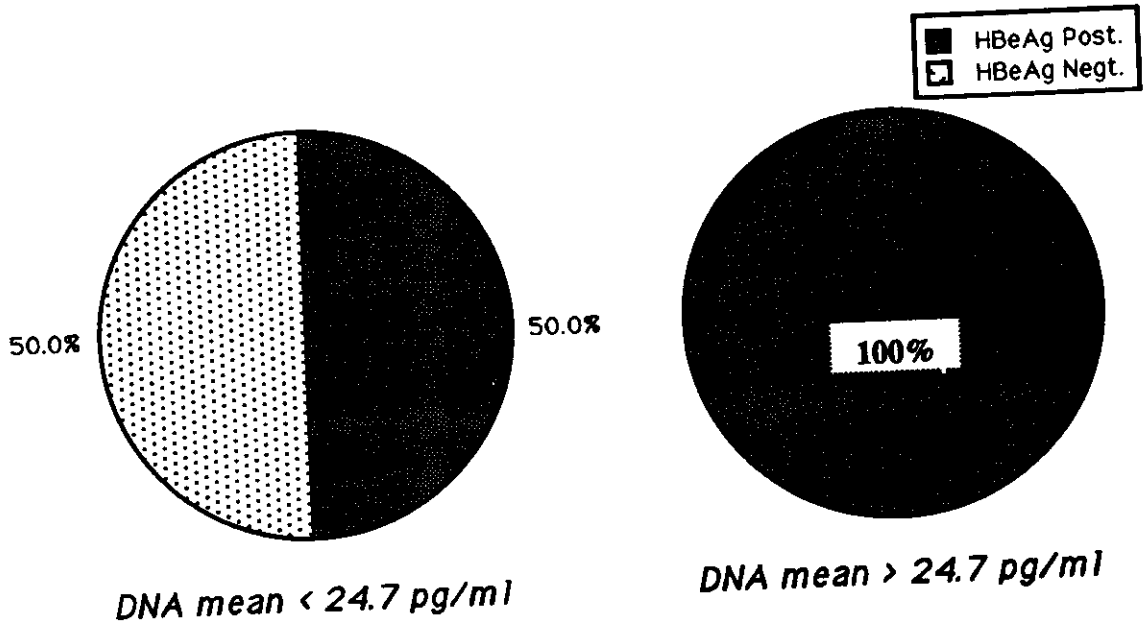
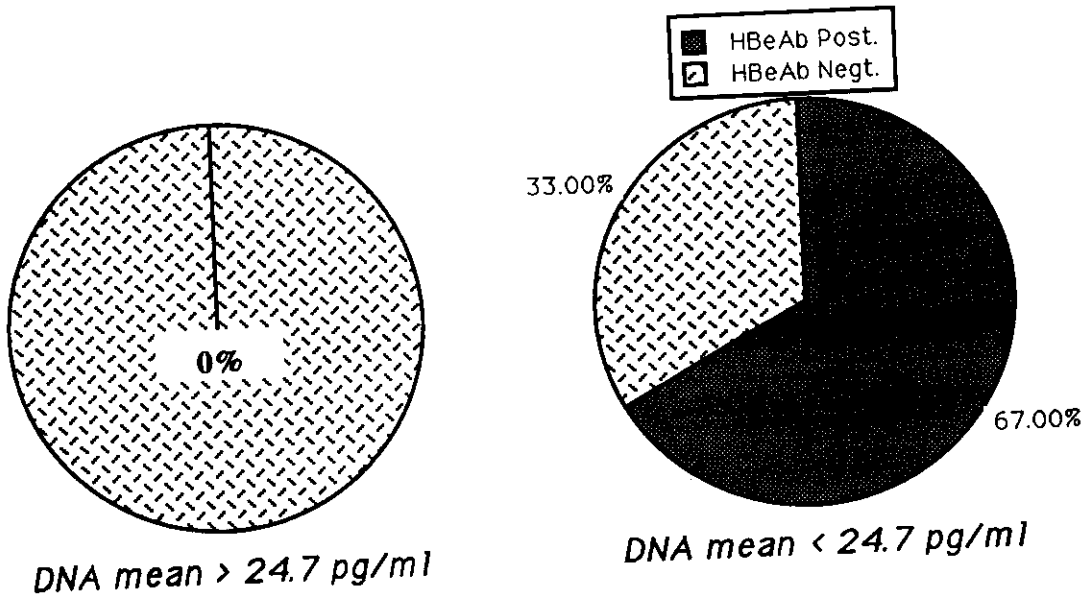


Fig.(7): Correlation between DNA level and HBeAg positivity in group B1

The HBeAg positivity increased from 50 to 100% when DNA level increased above the mean value (24.7 pg/ml.).

Table (23): **Correlation study between DNA level and HBeAb positivity among DNA-positive group B1.**

Parameter	Group	DNA level				X^2	P	Sig.
		≤ 24.7 pg		> 24.7 pg				
		No	%	No	%			
HBe Ab	+ ve	4	(67)	0	(0)	3.97	< 0.05	S.
	- ve	2	(33)	7	(100)			

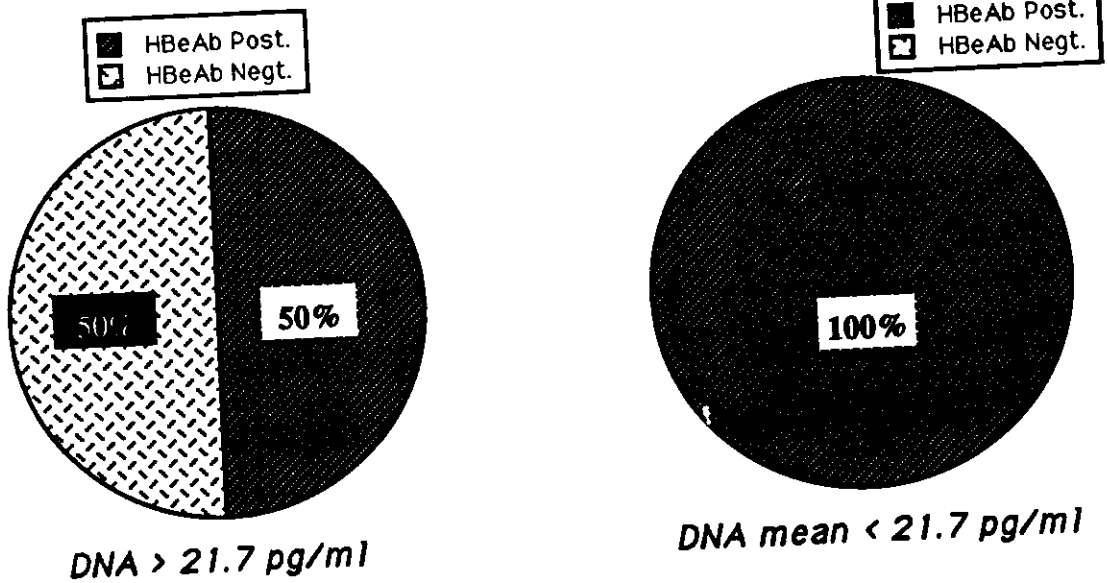


Fig(8): Correlation between DNA level and HBeAb positivity in group B1

The HBeAb positivity increased from 0.0 % to 67% when DNA level decreased below the mean value (24.7 pg/ml.).

Table (24): Correlation study between DNA level and HBeAb positivity among DNA-positive group B2.

Parameter	Group	DNA level				X^2	P	Sig.
		≤ 21.7 pg		> 21.7 pg				
		No	%	No	%			
HBe Ab	+ ve	2	(100)	2	(50)	0.094	> 0.05	N.S.
	- ve	0	(0)	2	(50)			



Fig(9): Correlation between DNA level and HBeAb positivity in group B2

The HBeAb positivity increased from 50 % to 100% when DNA level decreased below the mean value (21.7 pg/ml.).

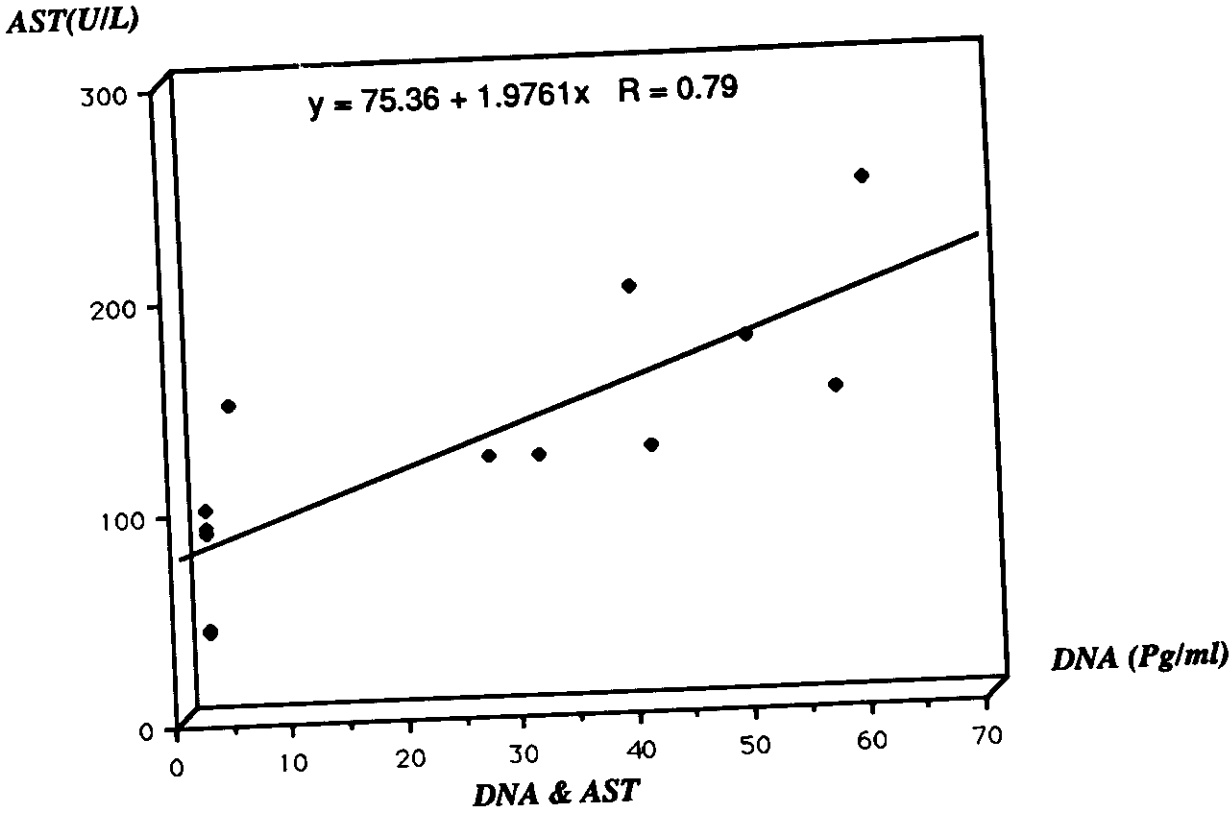


Fig (10) Positive correlation between . DNA &AST among group B1.

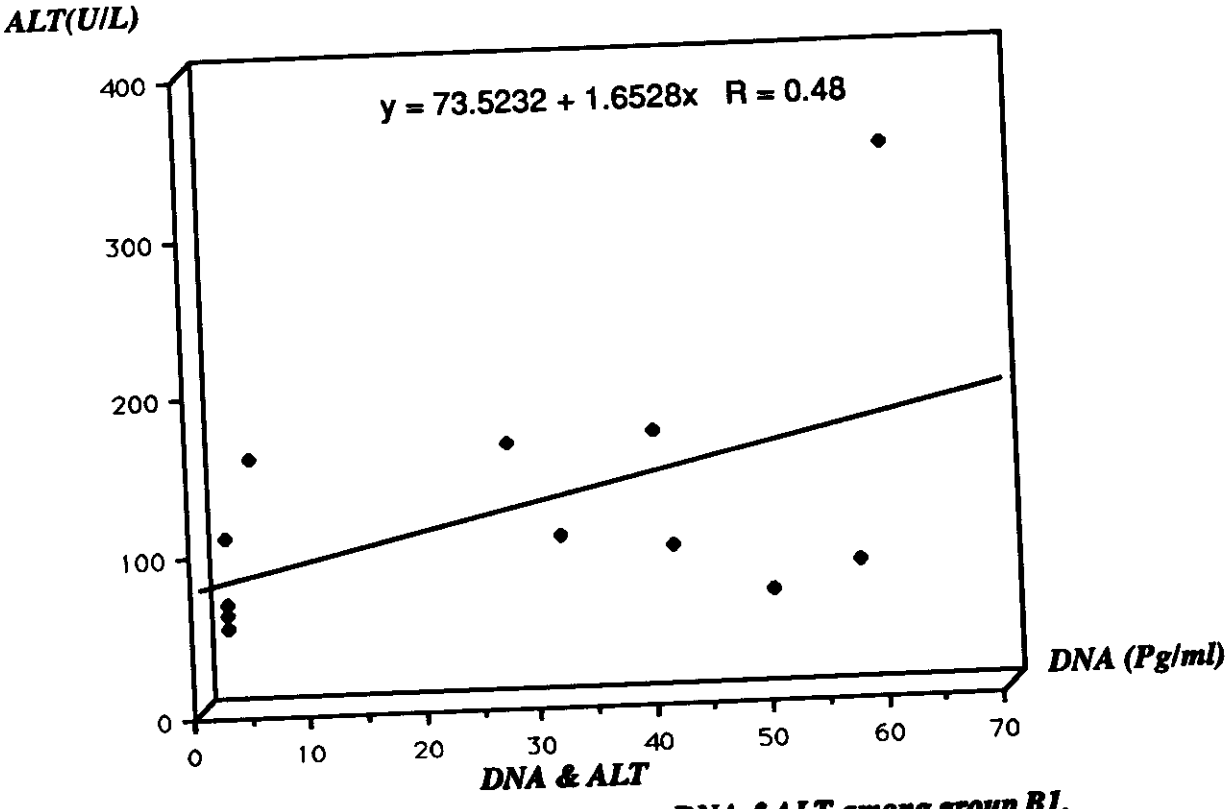


Fig (11) Positive correlation between . DNA &ALT among group B1.

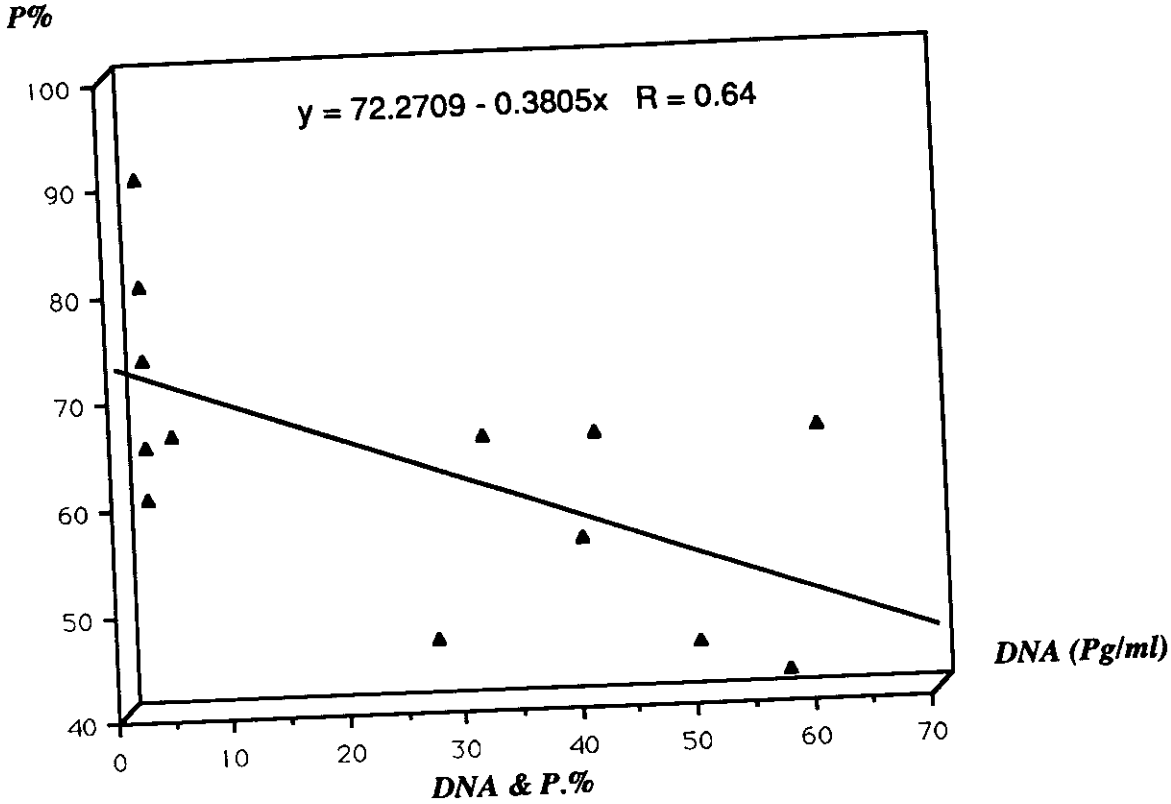


Fig.(12): Negative correlation between DNA and prothrombin concentration (p%) among group B1