Results

Table 1
Descriptive data of whole sample population

		Count	Column N %
population	control	30	37.5%
	patient	50	62.5%
group	control	30	37.5%
	mild	22	27.5%
	moderate	18	22.5%
	severe	10	12.5%
Sex	female	39	48.8%
	male	41	51.2%
Mode of Delivery	normal vaginal	35	44.3%
	cesarean	44	55.7%
Risk Factors	none	27	33.8%
	Antepartum hemmorrhage	7	8.8%
	meconium aspiration	7	8.8%
	intrauterine growth retardation	3	3.8%
	placental insuuficiency	1	1.2%
	prematur ruprure of membranes	10	12.5%
	cord around neck	4	5.0%
	macrosomia (large baby)	3	3.8%
	contracted pelvis	3	3.8%
	fetal distress	4	5.0%
	oligo hydramines	3	3.8%
	obstructed labor	7	8.8%
	decreased Fetal movement	1	1.2%
Amniotic fluid assessment	clear	69	86.2%
	meconium stained	10	12.5%
	blood stained	1	1.2%
convulsion	no convulsions	59	73.8%
	convulsions present	21	26.2%
outcome	fair	63	78.8%
	neurological sequele	9	11.2%

Table (1): Shows the descriptive data of whole sample population

Table 2
Mean gestational age, weight, Apgar score 1, 5 minutes, and lab data of whole sample population

	Mean	Standard Deviation	Minimum	Maximum
Mean gestational age (weeks)	39	4	4	42
Mean birth weight (Kg)	3.3	0.5	2.2	4.4
apgar score 1 minute	2	3	0	7
apgar score 5 minutes	5	3	2	10
TLC	17.5	4.5	9.7	30.0
HB	15	2	11	18
Platelet	208	64	110	372
Urea	59	29	12	107
Creatinin	2.3	10.5	0.2	1.6
BUN	18.1	5.8	11.4	32.0
Na+	129	9	111	145
K+	4.27	4.40	3.09	5.26
ALT	43	23	22	102
AST	85	64	34	260
PH	7.22	0.49	6.76	7.53
PCO2	46	8	31	59
HCO3	15	3	8	20
Ionized ca ++ mmol/l	1.09	0.17	0.63	1.37
Total serum Mg mg/dl	1.8	0.4	1.0	2.8

Table (2): Shows the mean gestational age (weeks), mean birth weight (Kg), Apgar score 1, 5 minutes, TLC, HB, platelets, urea, serum creatinine, BUN, Na^{+},K^{+}, ALT, AST, PH, PCO_2, HCO_3, ionized serum Ca^{+2} and total serum Mg of whole sample population

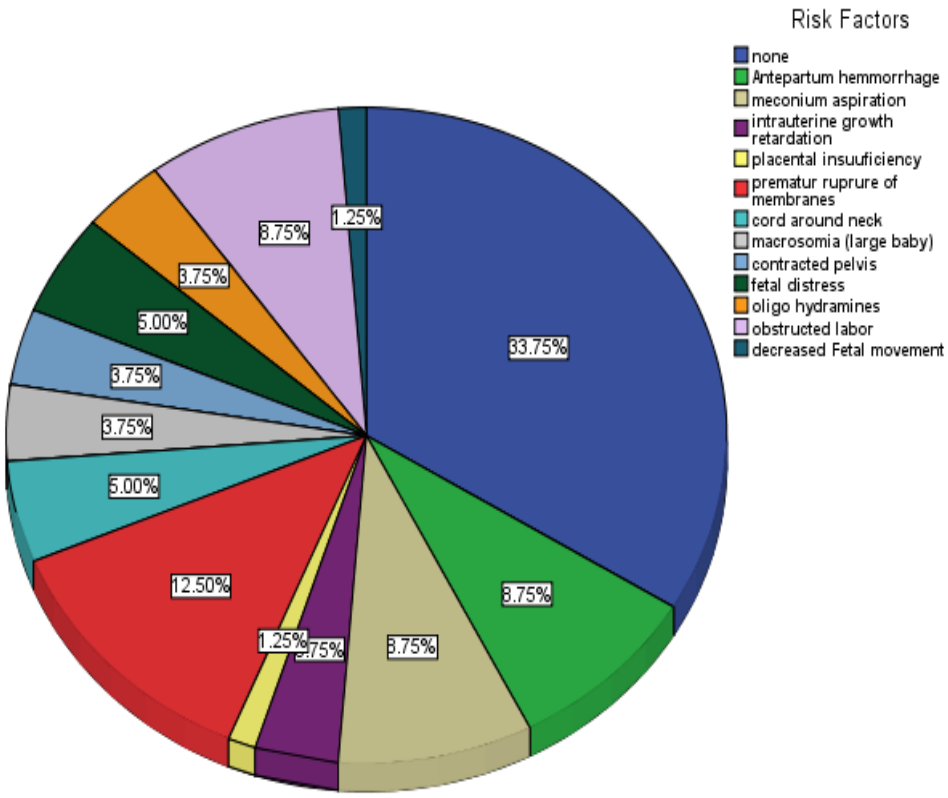

Figure (1)
Shows the identified risk factors of whole sample population

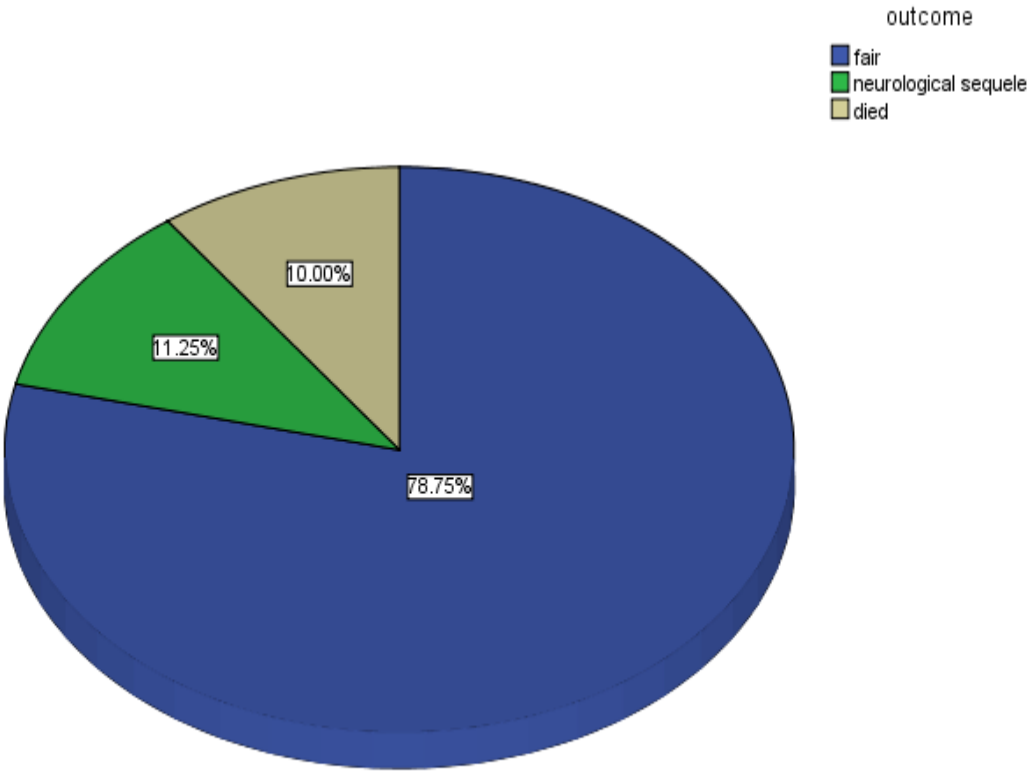

Figure (2)
Shows the outcome of whole sample population

Table (3)
Comparative study between control and patient groups as regards clinical data

		population				X^2	P value	Sig.
		Control		patient				
		Count	Column N %	Count	Column N %			
Sex	female	15	50.0%	24	48.0%	.030	.862	N.S
	male	15	50.0%	26	52.0%			
Mode of Delivery	normal vaginal	16	51.7%	20	40.0%	1.022	.312	N.S
	cesarean	14	48.3%	30	60.0%			
Risk Factors	none	19	63.3%	8	16.0%	24.712	.016	S.
	Antepartum hemmorrhage	2	6.7%	5	10.0%			
	meconium aspiration	-	-	7	14.0%			
	intrauterine growth retardation	-	-	3	6.0%			
	placental insuuficiency	-	-	1	2.0%			
	prematur ruprure of membranes	4	13.3%	6	12.0%			
	cord around neck	1	3.3%	3	6.0%			
	macrosomia (large baby)	1	3.3%	2	4.0%			
	contracted pelvis	1	3.3%	2	4.0%			
	fetal distress	1	3.3%	3	6.0%			
	oligo hydramines	1	3.3%	2	4.0%			
	obstructed labor	-	-	7	14.0%			
	decreased Fetal movement	-	-	1	2.0%			
Amniotic fluid assessment	clear	27	90.0%	42	84.0%	3.052	.217	N.S
	meconium stained	2	6.7%	8	16.0%			
	blood stained	1	3.3%	0	.0%			
Convulsion	no convulsions	30	100.0%	29	58.0%	17.085	.001	H.S.
	convlsions present	-	-	21	42.0%			
Outcome	fair	30	100.0%	33	66.0%	12.952	.002	H.S.
	neurological sequele	-	-	9	18.0%			
	died	-	-	8	16.0%			

S. significant at level of 0.05 H.S. highly significant at level of 0.01 N.S. not significant

Table (3): Shows that:

- ***Risk factors are present more in patient group.***
- ***Patient group are highly significant susceptible for convulsion.***
- ***Patient group are highly significant had less favorable outcome.***

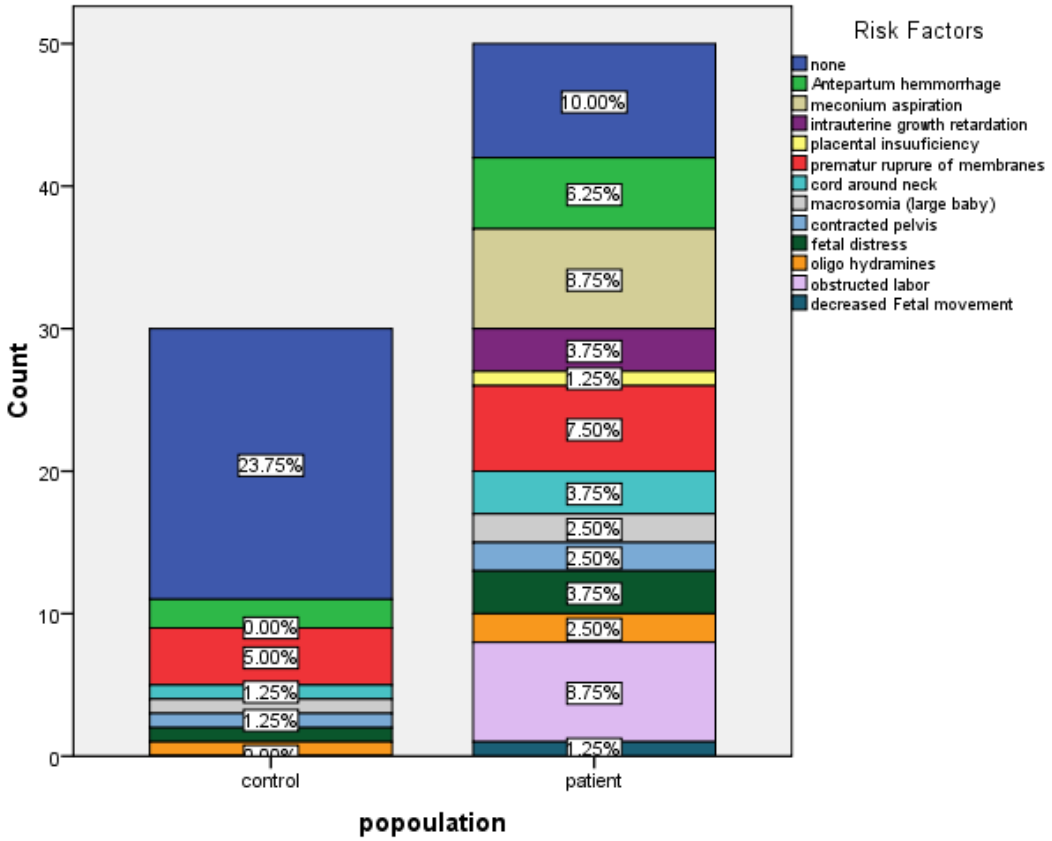

Figure (3)
Shows comparison between percentage of risk factors identified in both patient and control groups.

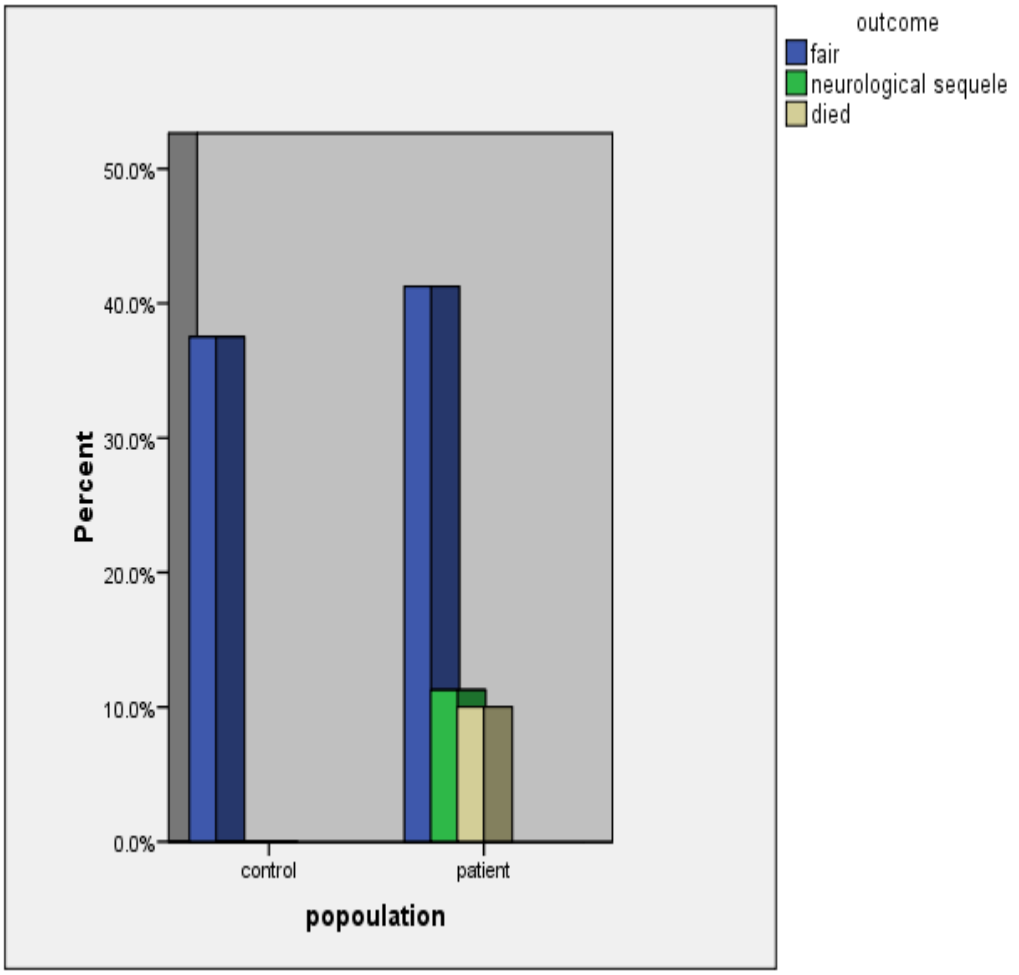

Figure (4)
Shows comparison in outcome between patient and control groups.

Table (4)

Comparative study between different patient groups as regards clinical data

		Group						X^2	P value	Sig.
		mild		Moderate		severe				
		Count	Column N %	Count	Column N %	Count	Column N %			
Sex	female	9	40.9%	9	50.0%	6	60.0%	1.049	.592	N.S
	male	13	59.1%	9	50.0%	4	40.0%			
Mode of Delivery	normal vaginal	7	31.8%	9	50.0%	4	40.0%	1.364	.506	N.S
	cesarean	15	68.2%	9	50.0%	6	60.0%			
Risk Factors	none	6	27.3%	2	11.1%	0	.0%	30.291	.175	N.S
	Antepartum hemmorrhage	3	13.6%	1	5.6%	1	10.0%			
	meconium aspiration	1	4.5%	2	11.1%	4	40.0%			
	intrauterine frowth retardation	1	4.5%	1	5.6%	1	10.0%			
	placental insuuficiency	-	-	-	-	1	10.0%			
	prematur ruprure of membranes	2	9.1%	4	22.2%	-	-			
	cord around neck	-	-	2	11.1%	1	10.0%			
	macrosomia (large baby)	-	-	2	11.1%	-	-			
	contracted pelvis	1	4.5%	1	5.6%	-	-			
	fetal distress	1	4.5%	1	5.6%	1	10.0%			
	oligo hydramines	1	4.5%	-	-	1	10.0%			
	obstructed labor	5	22.7%	2	11.1%	-	-			
	decreased Fetal movement	1	4.5%	-	-	-	-			
Amniotic fluid assessment	clear	20	90.9%	16	88.9%	6	60.0%	5.387	.068	N.S
	meconium stained	2	9.1%	2	11.1%	4	40.0%			
	blood stained	-	-	-	-	-	-			
convulsions	no convulsions	22	100.0%	7	38.9%	-	-	32.439	.001	H.S.
	convlsions present	-	-	11	61.1%	10	100.0%			
outcome	fair	22	100.0%	11	61.1%	-	-	50.864	.001	H.S.
	neurological sequele	-	-	7	38.9%	2	20.0%			
	died	-	-	-	-	8	80.0%			

Table (4): Shows that:

- ***Convulsion were highly significant present in patients with severe HIE than patients with moderate HIE and patients with mild HIE.***
- ***Convulsion were highly significant present in patients with moderate HIE than patients with mild HIE.***
- ***Outcome was significantly less favorable in patients with severe HIE.***

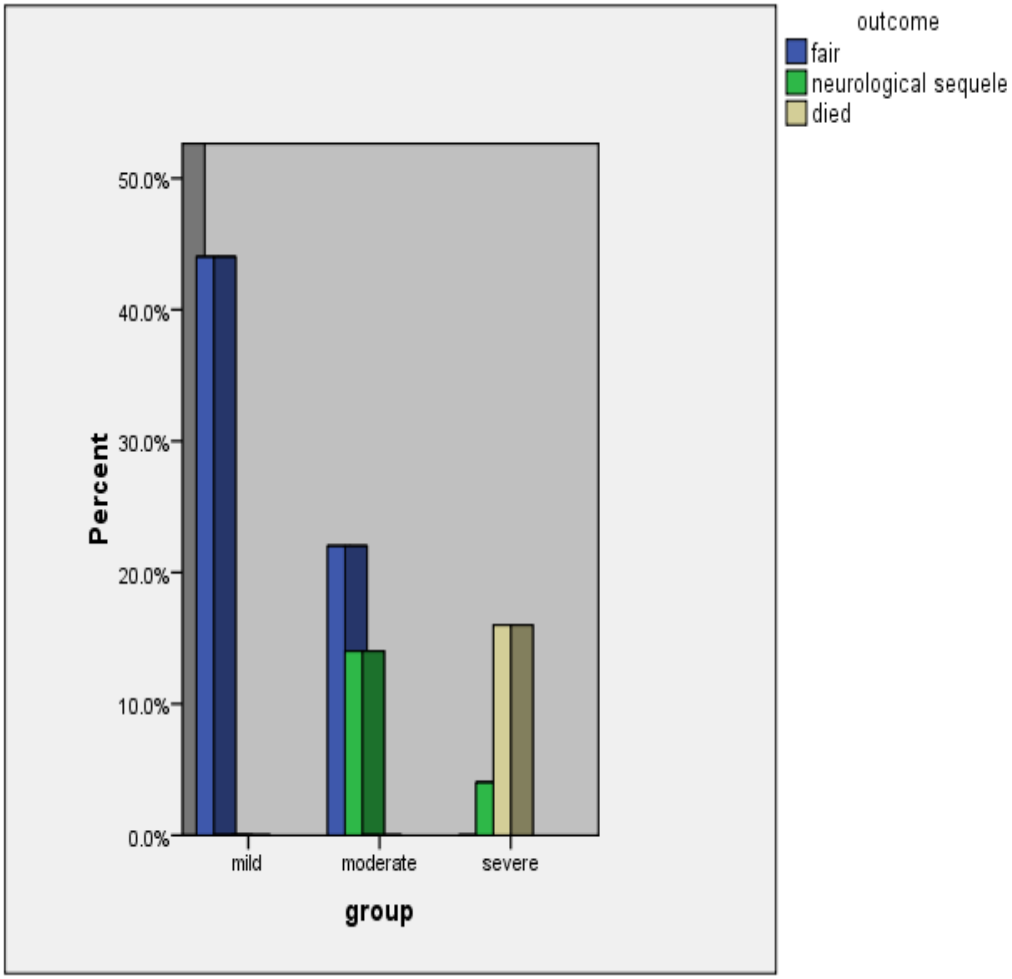

Figure (5)
Shows comparison between mild, moderate and severe cases of HIE in outcome.

Table (5)

Comparative study between control and patient groups as regards lab and some clinical data

	population				Test value	P value	Sig.
	control		patient				
	Mean	Standard Deviation	Mean	Standard Deviation			
Mean gestational age (weeks)	39	1	38	5	-.208 μ	.835	N.S
Mean birth weight (Kg)	3.3	.4	3.3	.5	-.174 μ	.862	N.S
apgar score 1 minute	6	1	0	0	27.092 T	.001	H.S.
apgar score 5 minutes	9	1	3	1	26.627 T	.001	H.S.
TLC	15.27	3.43	18.85	4.55	-3.717 T	.001	H.S.
HB	15	2	15	2	.737 T	.463	N.S
Platelet	264	59	174	38	-5.979 μ	.001	H.S.
Urea	24	7	80	13	-23.781- T	.001	H.S.
Creatinin	.88	.2	1.21	.2	-5.284 μ	.001	H.S.
BUN	12.8	1.4	21.3	5.0	-11.289 μ	.001	H.S.
Na+	138	4	123	5	15.871 T	.001	H.S.
K+	4.18	0.47	4.32	0.43	-1.319 T	.191	N.S.
ALT	26	2	53	23	-8.123 T	.001	H.S.
AST	38	2	113	67	-7.460 μ	.001	H.S.
PH	7.38	.05	6.99	.11	21.767 T	.001	H.S.
PCO2	37	3	51	4	-15.819 T	.001	H.S.
HCO3	18	1	13	3	12.377 T	.001	H.S.
Ionized ca ++ mmol/l	1.25	.07	.99	.14	11.287 T	.001	H.S.
Total serum Mg mg/dl	2.05	.29	1.63	.34	-4.588 μ	.001	H.S.

T Tested by unpaired t-test
μ Tested by Mann-Whitney test.

Table (5): Shows that:

- ***Apgar score 1,5 minutes were highly significant lower in patient group than control group***
- ***Urea, creat, BUN, ALT, AST and TLC were highly significant higher in patient group than control group.***
- ***Platelets, PH, HCO_3 and Na^+ were highly significant lower in patient group than control group.***
- ***Ionized serum Ca^{+2} and total serum Mg were highly significant lower in patient group than control group.***

Figure (6)
Shows comparison between control and patient groups as regards ionized serum Ca^{+2}

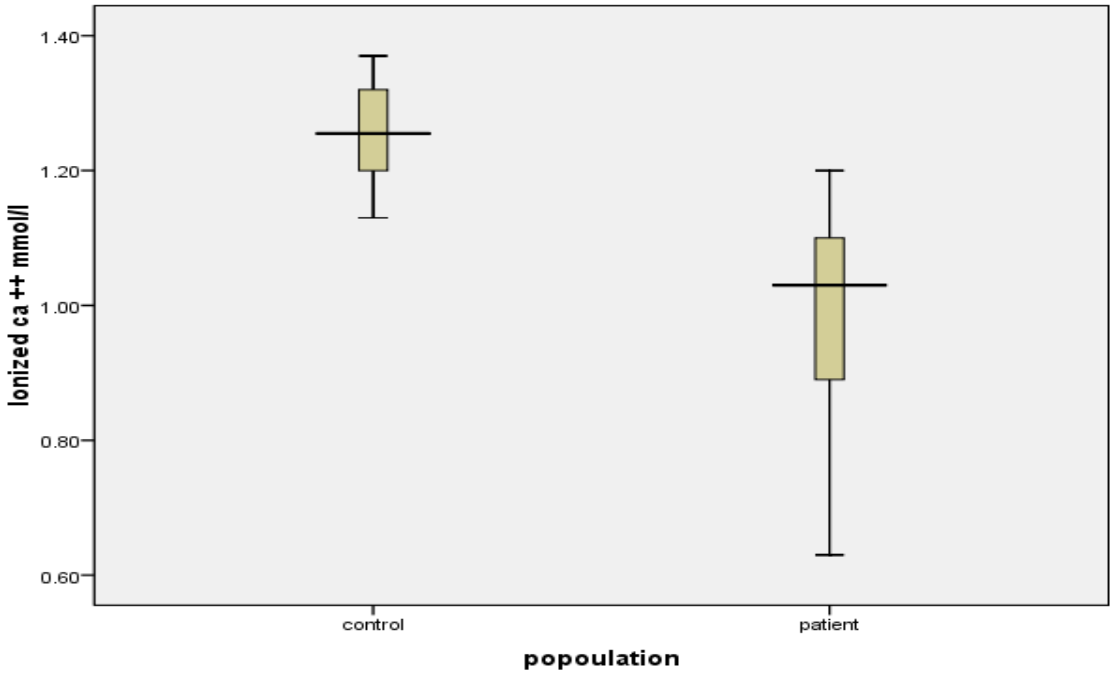

Figure (7)
Shows comparison between control and patient groups as regards total serum Mg

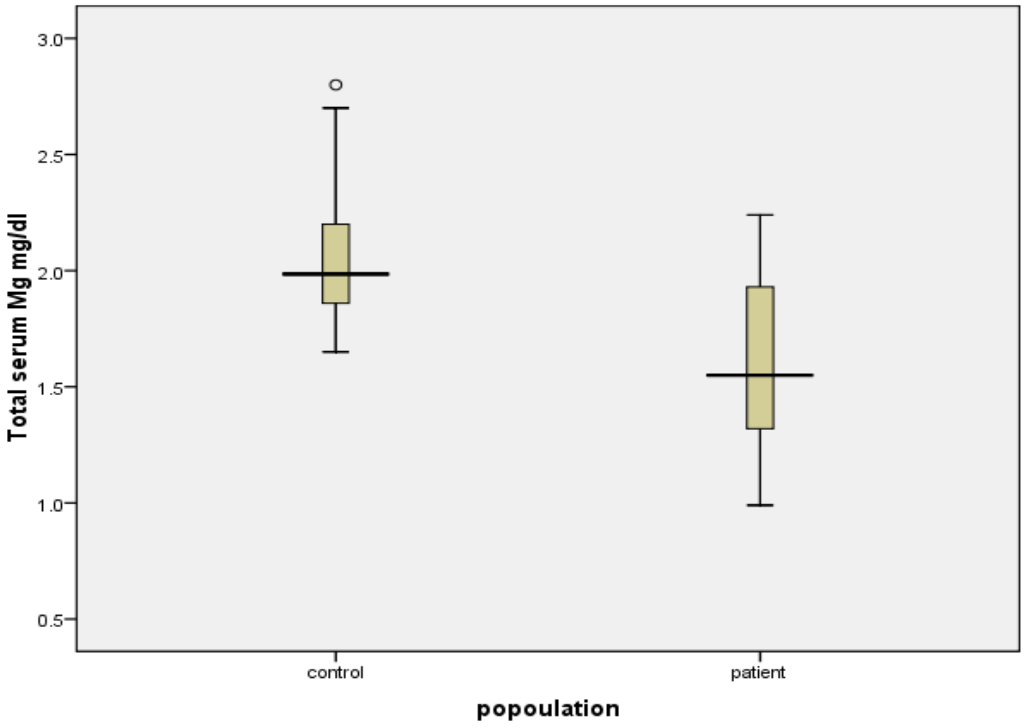

Figure (8)
Shows comparison between control and patient groups as regards PH

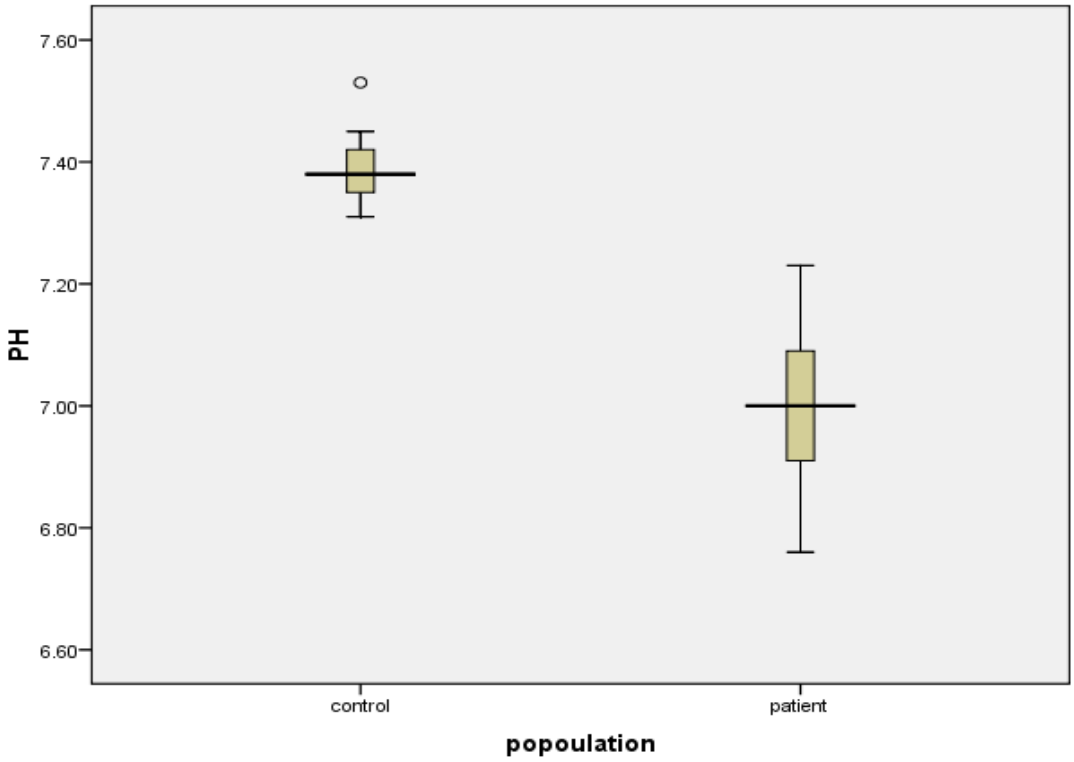

Figure (9)
Shows comparison between control and patient groups as regards HCO_3

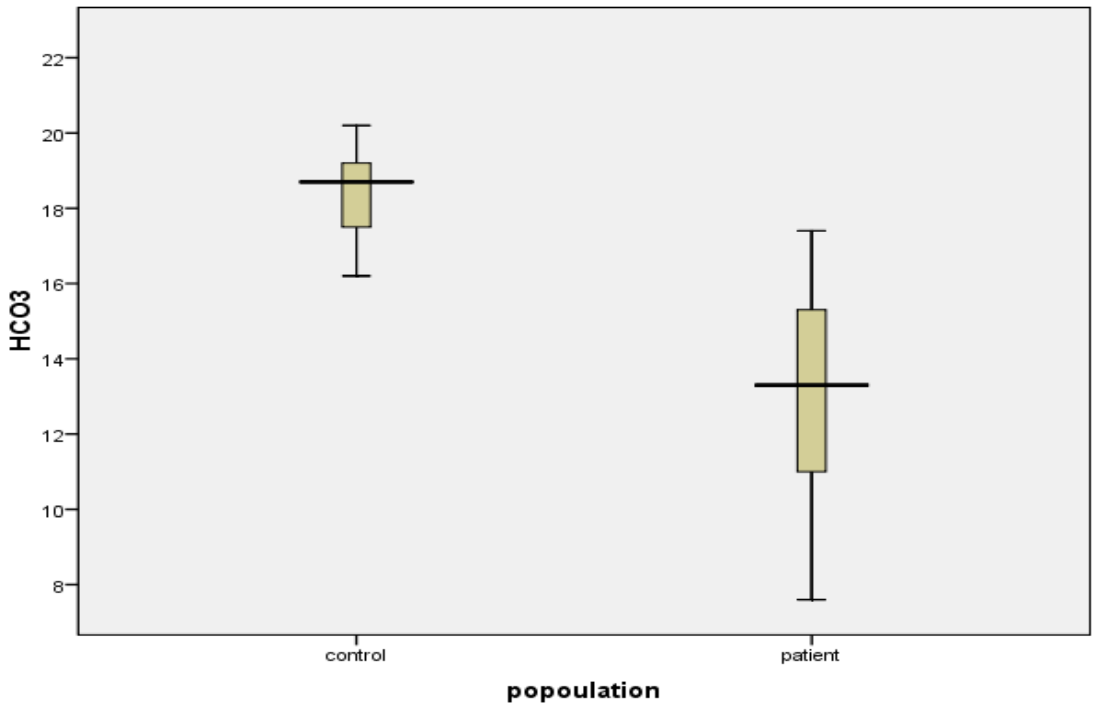

Figure (10)
Shows comparison between control and patient groups as regards PCO_2

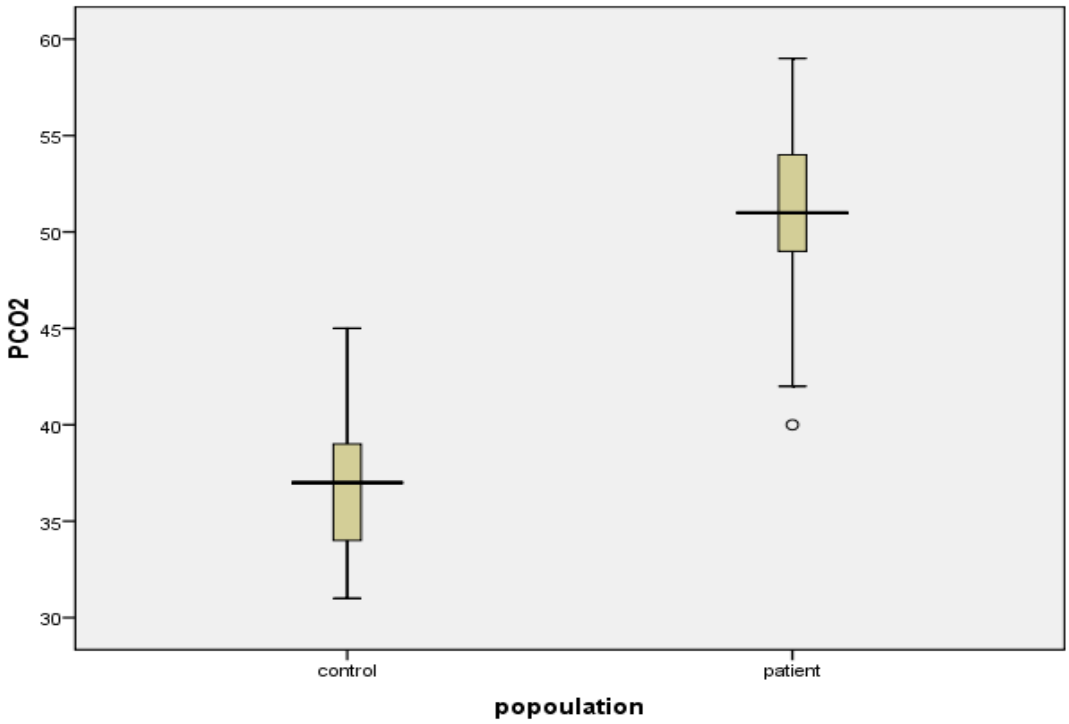

Figure (11)
Shows comparison between control and patient groups as regards AST

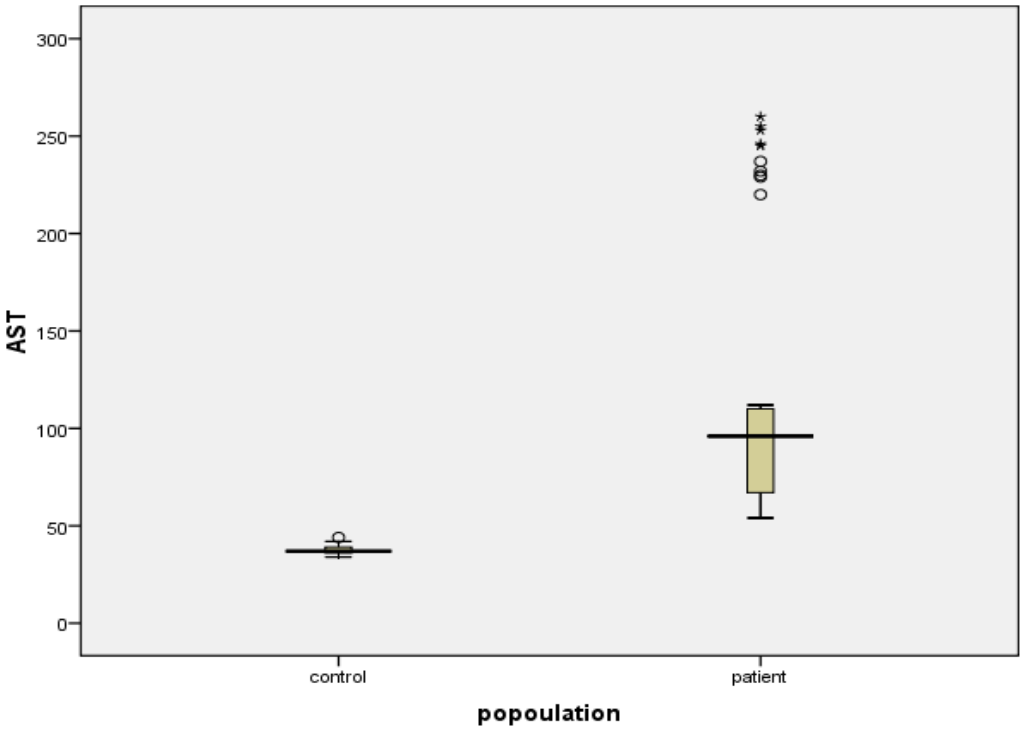

Figure (12)
Shows comparison between control and patient groups as regards ALT

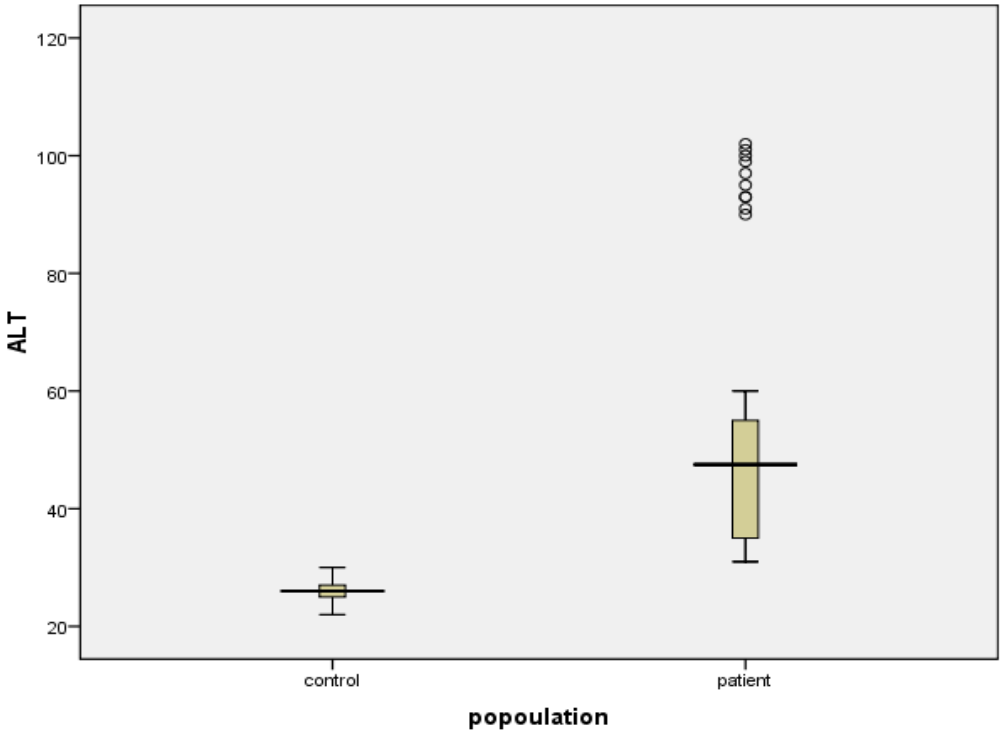

Figure (13)
Shows comparison between control and patient groups as regards Na^+

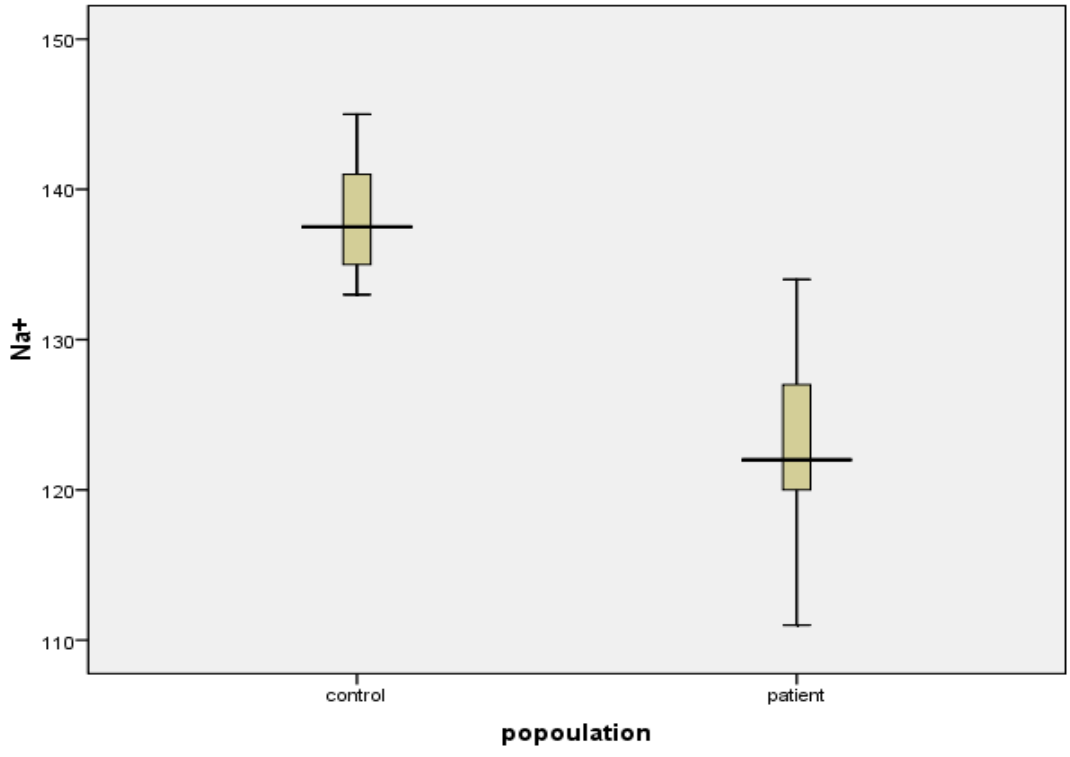

Figure (14)
Shows comparison between patient and control groups as regards urea

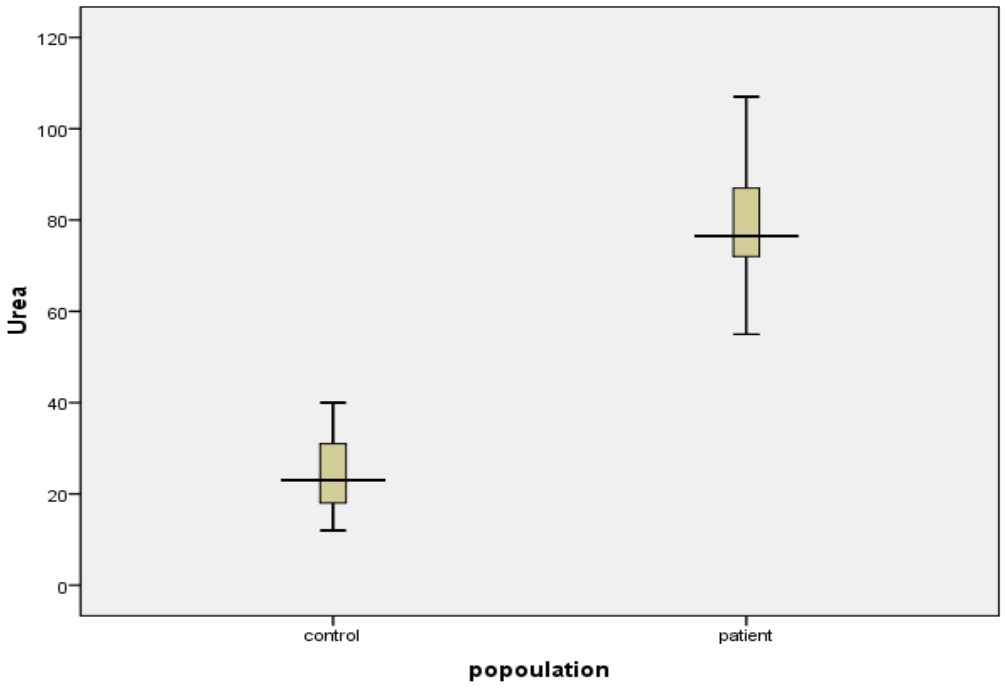

Figure (15)
Shows comparison between control and patient groups as regards serum creatinine

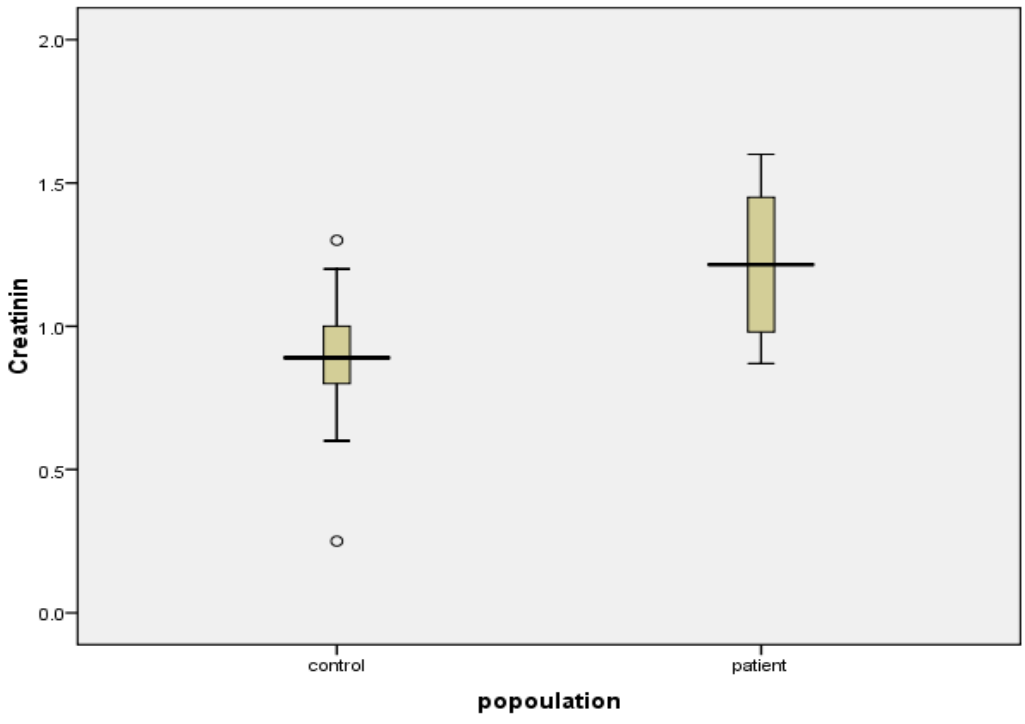

Figure (16)
Shows comparison between control and patient groups as regards BUN

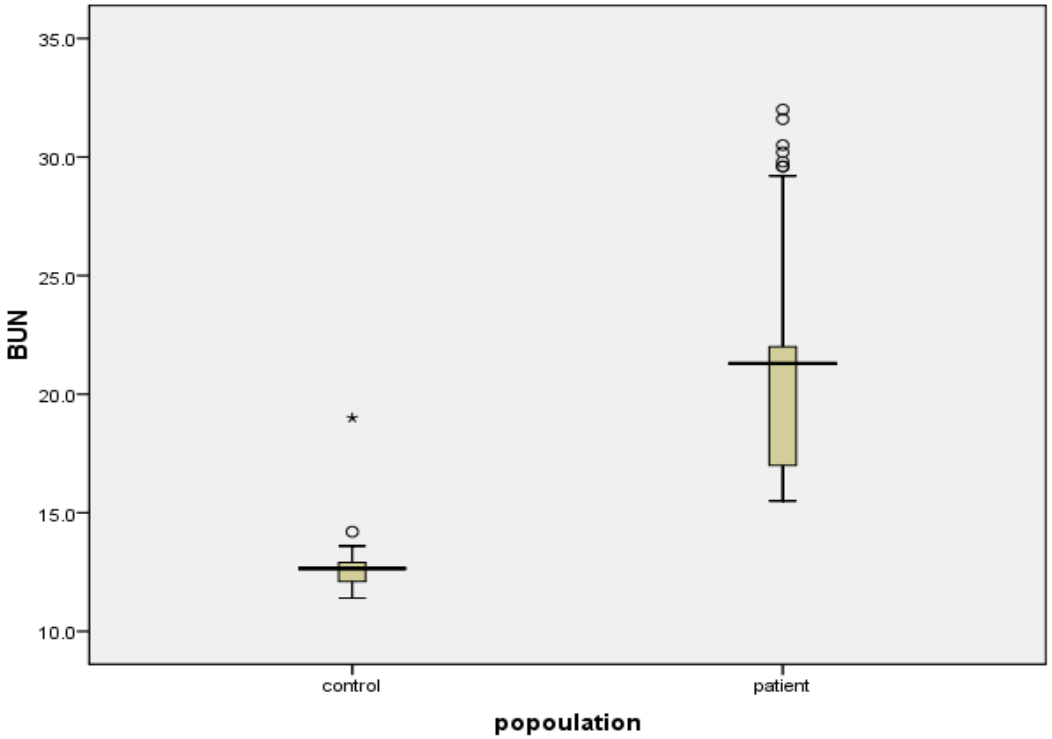

Figure (17)
Shows comparison between patient and control groups as regards platelets

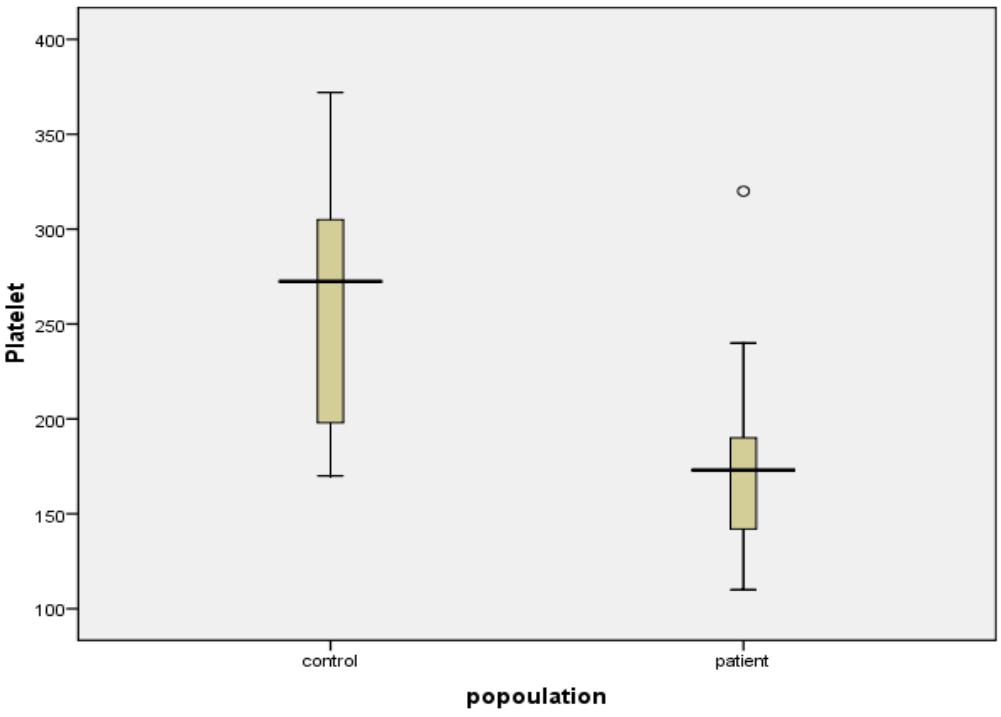

Figure (18)

Shows comparison between control and patient group as regards TLC

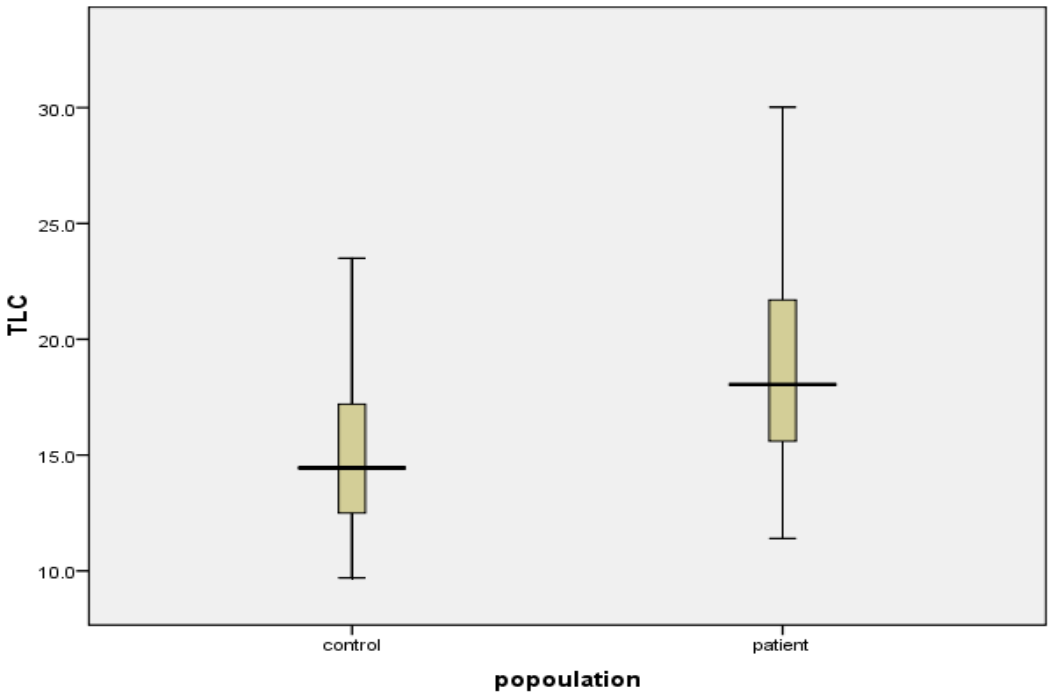

Figure (19)

Shows comparison between patient and control groups as regards apgar score 1,5 minutes

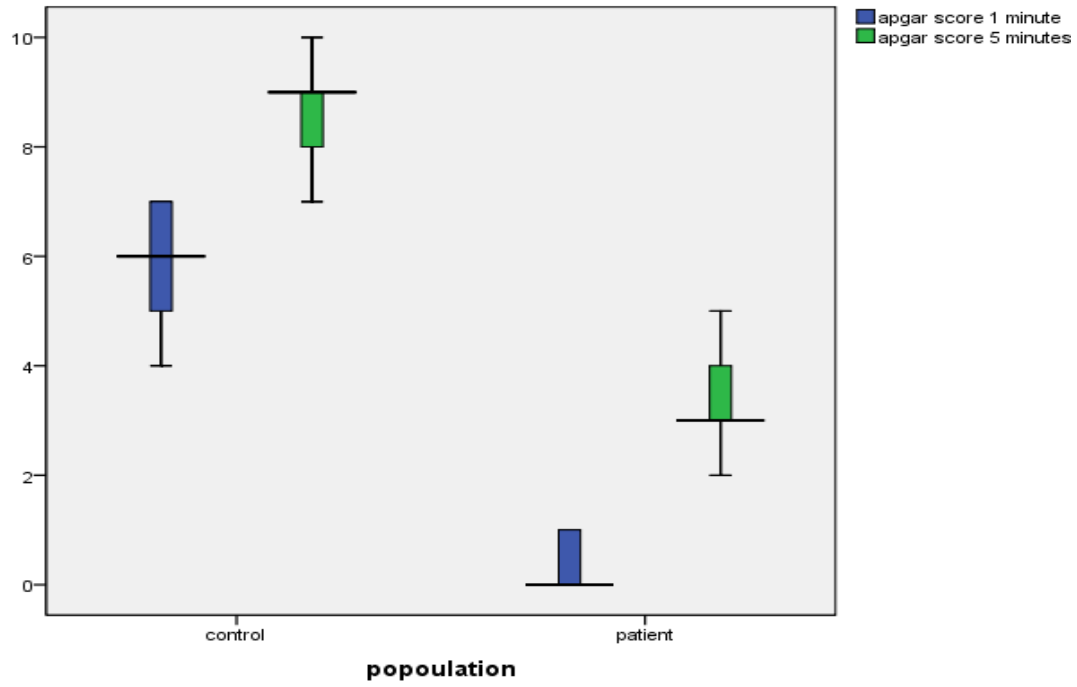

Table (6)
Comparative study between different patient groups as regards lab and some clinical data

	Group						Test value	P value	Sig.
	mild		moderate		severe				
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation			
Mean gestational age (weeks)	37	8	39	2	39	2	.702‡	.704	N.S
Mean birth weight (Kg)	3.2	.4	3.3	.5	3.3	.6	.555†	.578	N.S
apgar score 1 minute	0	1	0	0	0	0	1.58‡	.454	N.S
apgar score 5 minutes	4	1	3	1	3	1	10.52†	.001	H.S.
TLC	17.56	4.81	19.36	4.25	20.76	3.98	1.958†	.152	N.S
HB	15	2	14	2	14	2	1.191†	.313	N.S
Platelet	187	39	173	34	147	33	8.95‡	.011	S.
Urea	69	7	81	6	100	5	79.88†	.001	H.S.
Creatinin	.97	.08	1.4	.1	1.5	.1	37.3‡	.001	H.S.
BUN	16.9	.9	21.7	.5	30.1	1.0	42.21‡	.001	H.S.
Na+	128	3	120	2	117	3	63.15†	.001	H.S.
K+	4.28	0.44	4.24	0.40	4.54	0.41	1.782†	.180	N.S.
ALT	34	2	52	4	96	4	1323.6†	.001	H.S.
AST	64	5	103	6	241	13	1898.6†	.001	H.S.
PH	7.09	.07	6.9	.04	6.87	.07	57.74†	.001	H.S.
PCO2	49	4	52	3	53	3	8.44†	.001	H.S.
HCO3	15	1	12	1	9	1	38.39‡	.001	H.S.
Ionized ca ++ mmol/l	1.10	.05	.96	.09	.82	.13	41.23†	.001	H.S.
Total serum Mg mg/dl	1.9	.2	1.5	.1	1.2	.1	36.57‡	.001	H.S.

S. significant at level of 0.05
H.S. highly significant at level of 0.01
N.S. not significant

†Tested by one way analysis of variance(ANOVA).
‡Tested by kruskal-Wallis test.

Table (6): Shows that:

- ***Apgar score 1, 5 minutes, Na^{+},PH, HCO_3, ionized serum Ca^{+2}, total serum Mg were highly significant lower in patients with severe HIE in comparison with patients with moderate and mild HIE, and in patients with moderate HIE in comparison with patients with mild HIE.***
- ***Urea, create, ALT, AST, PCO_2 were highly significant higher in patients with severe HIE in comparison with patients with moderate and mild HIE and in patients with moderate HIE in comparison with patients with mild HIE.***

Figure (20)
Shows comparison between cases of mild, moderate and severe HIE as regards total serum Mg

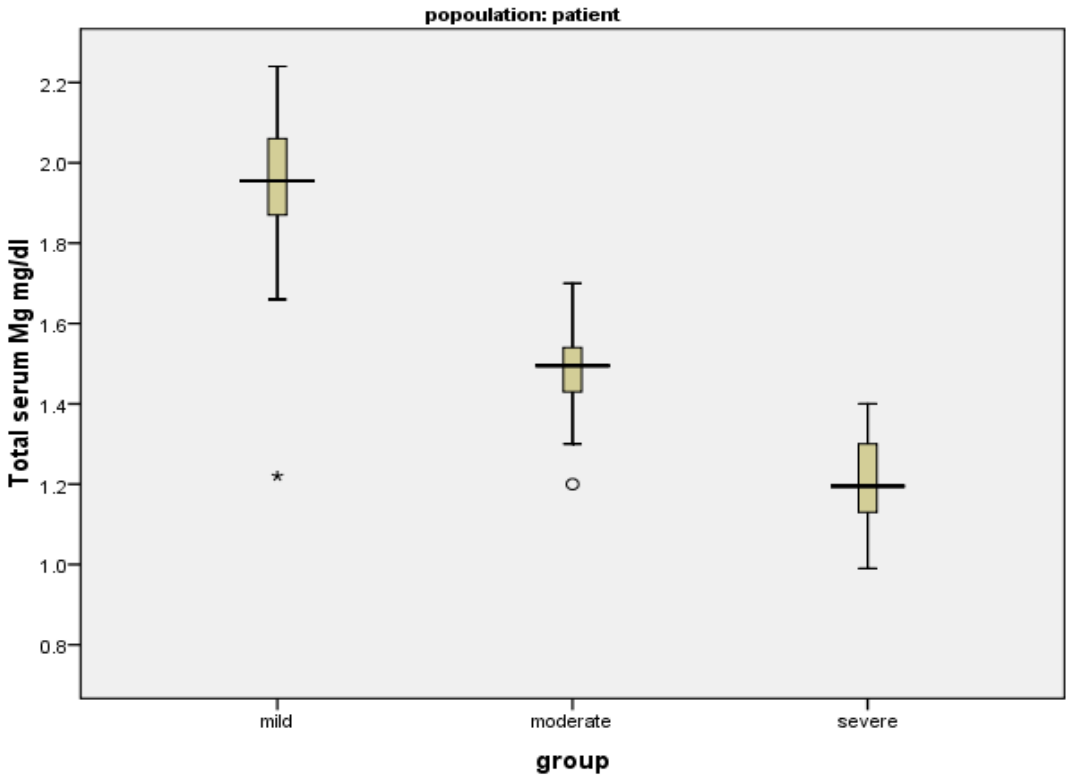

Figure (21)
Shows comparison between mild, moderate and severe HIE as regards ionized serum ca^{+2}

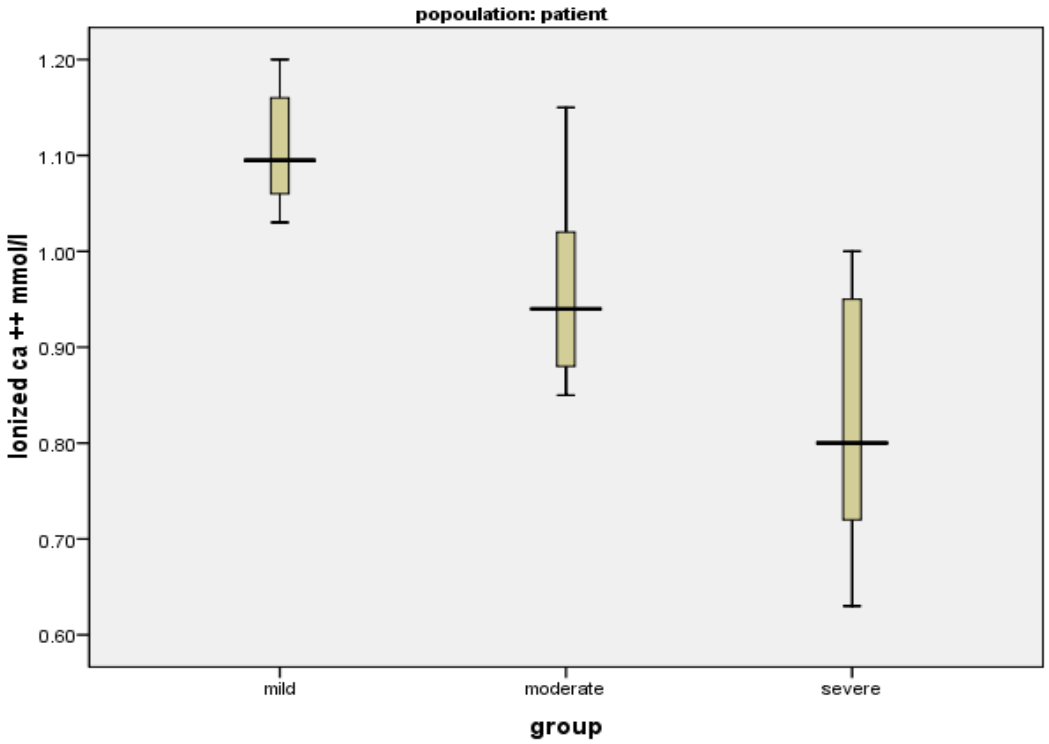

Figure (22)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards PH

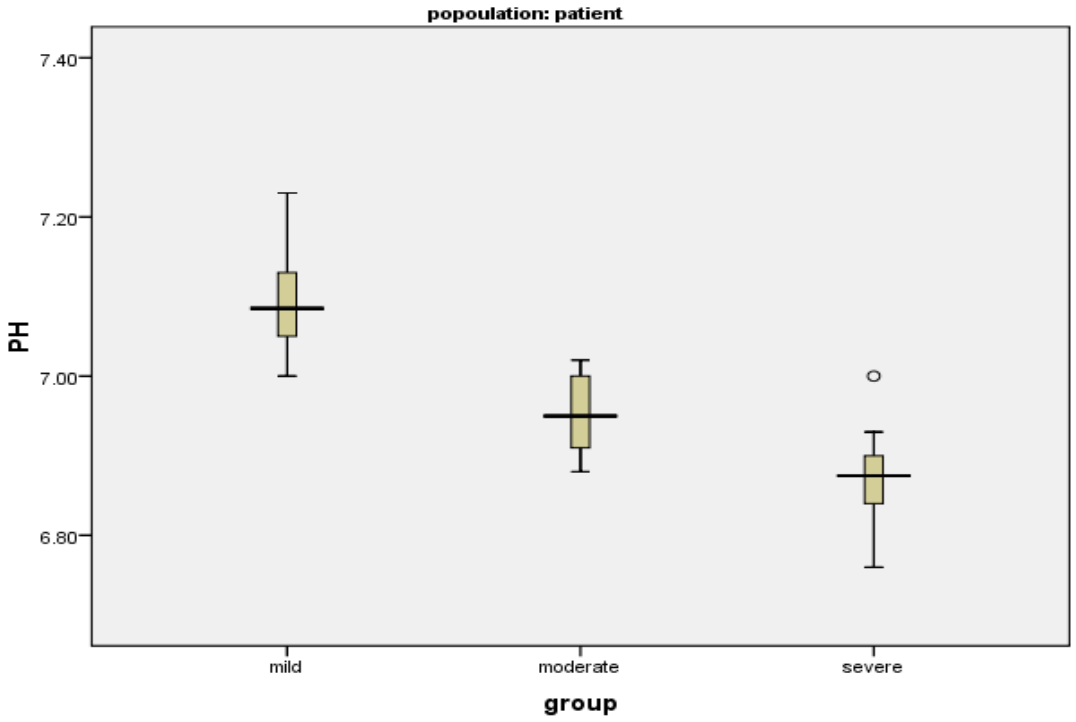

Figure (23)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards HCO_3

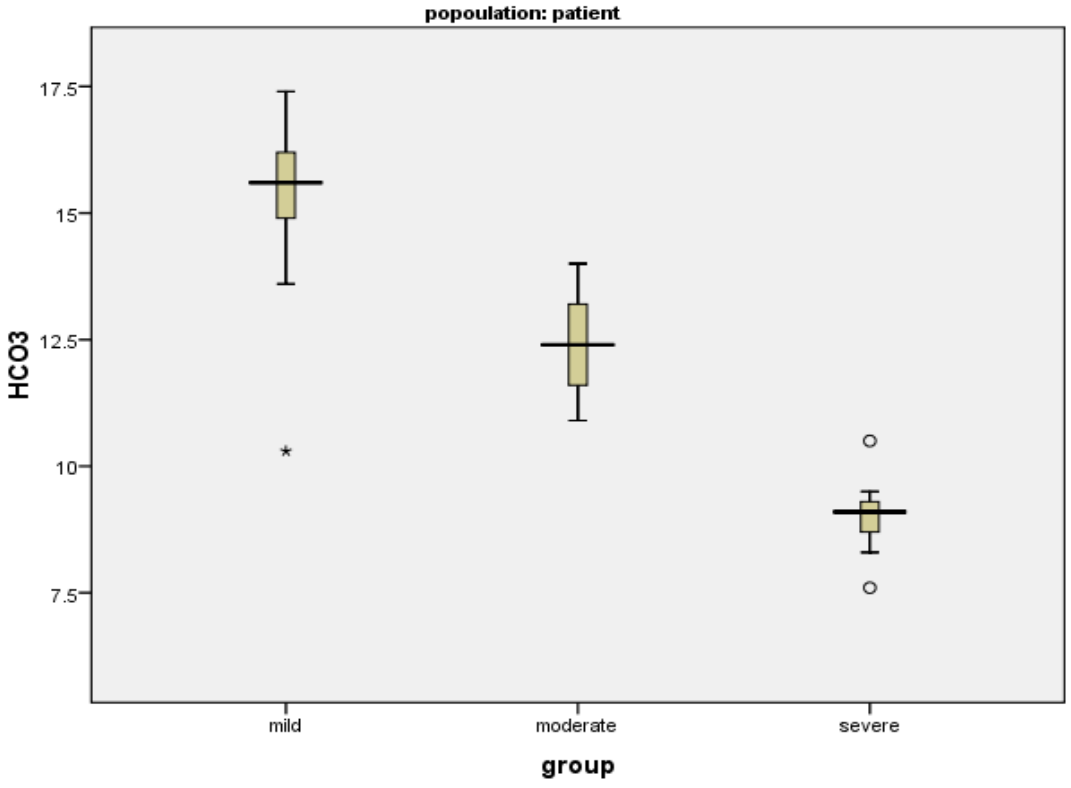

Figure (24)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards PCO_2

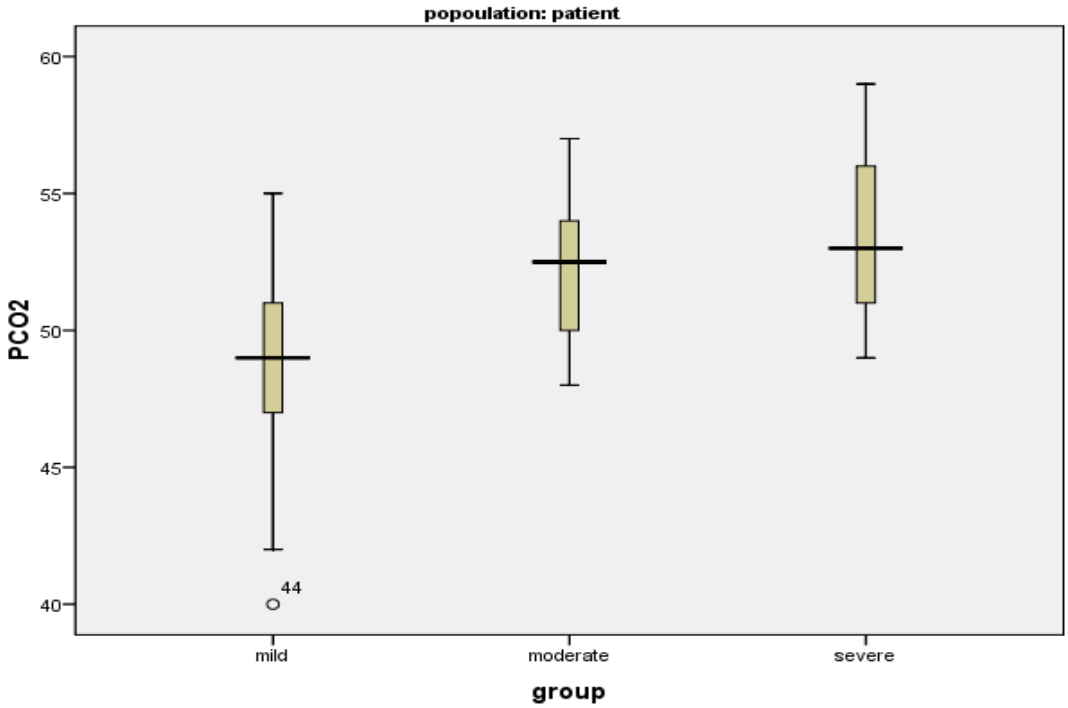

Figure (25)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards AST

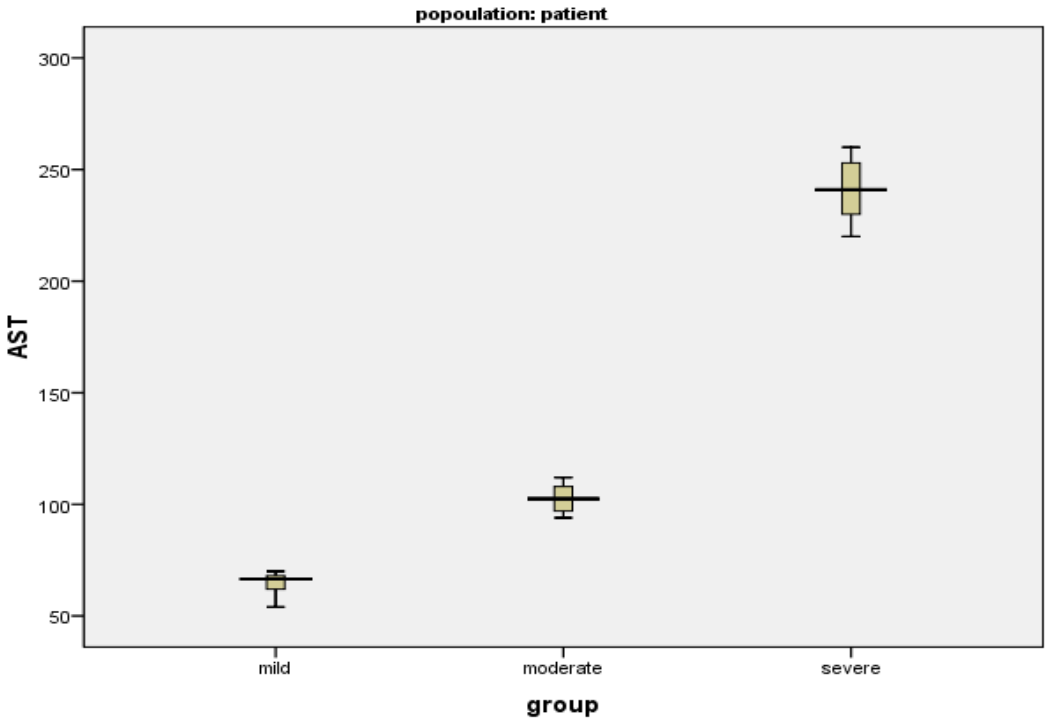

Figure (26)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards ALT

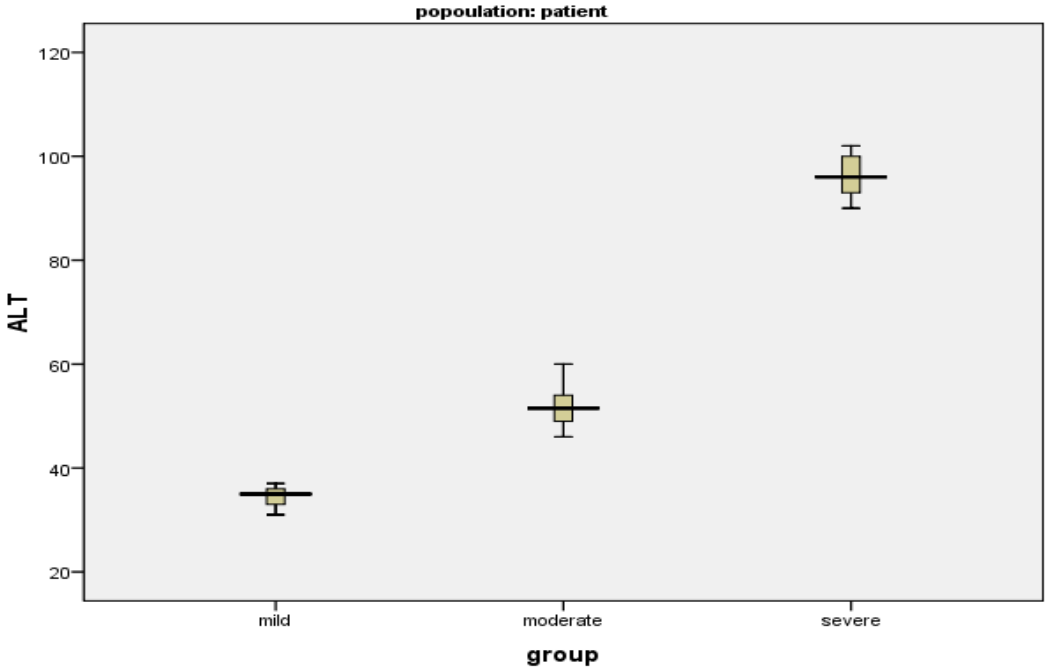

Figure (27)
Shows Comparison between different patient groups (mild, moderate, severe) HIE as regards Na^+

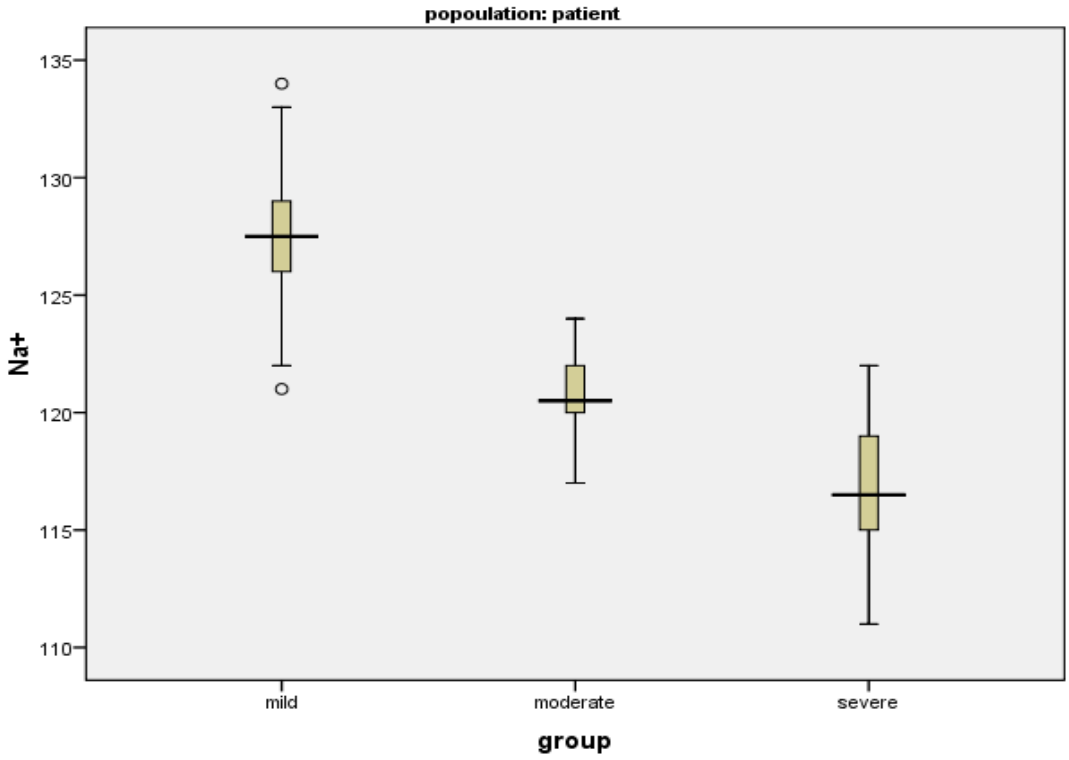

Figure (28)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards urea

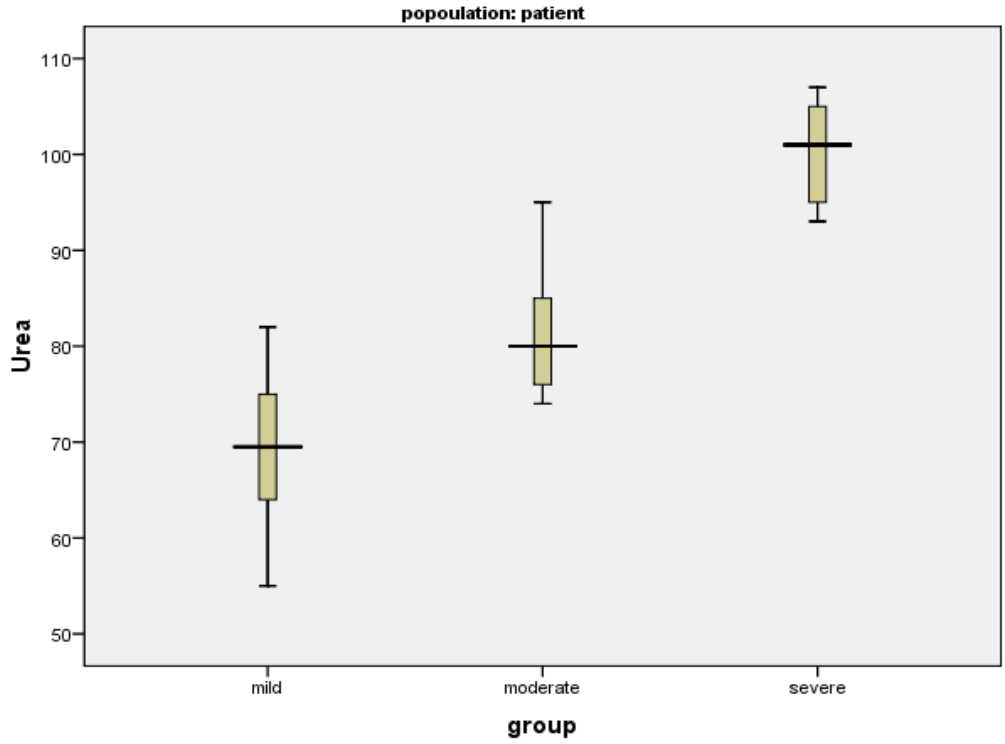

Figure (29)
Shows comparison between different patient groups (mild, moderate, severe)HIE as regards serum creatinine

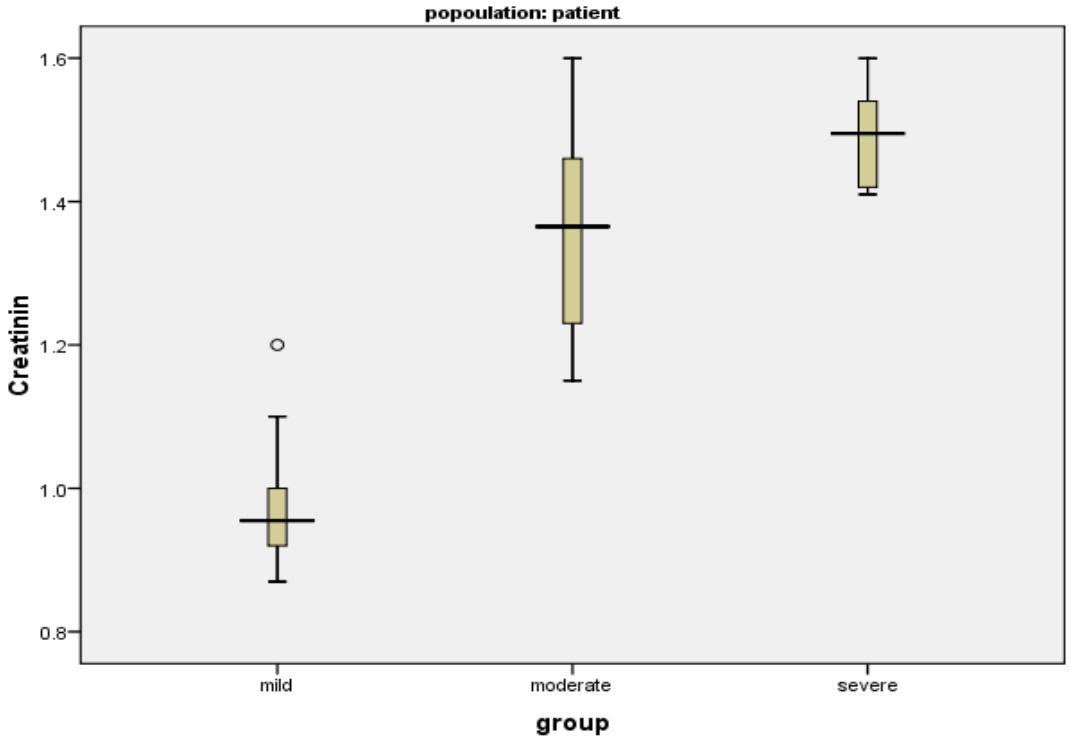

Figure (30)
Shows comparison between different patients groups (mild, moderate, severe) HIE as regards BUN

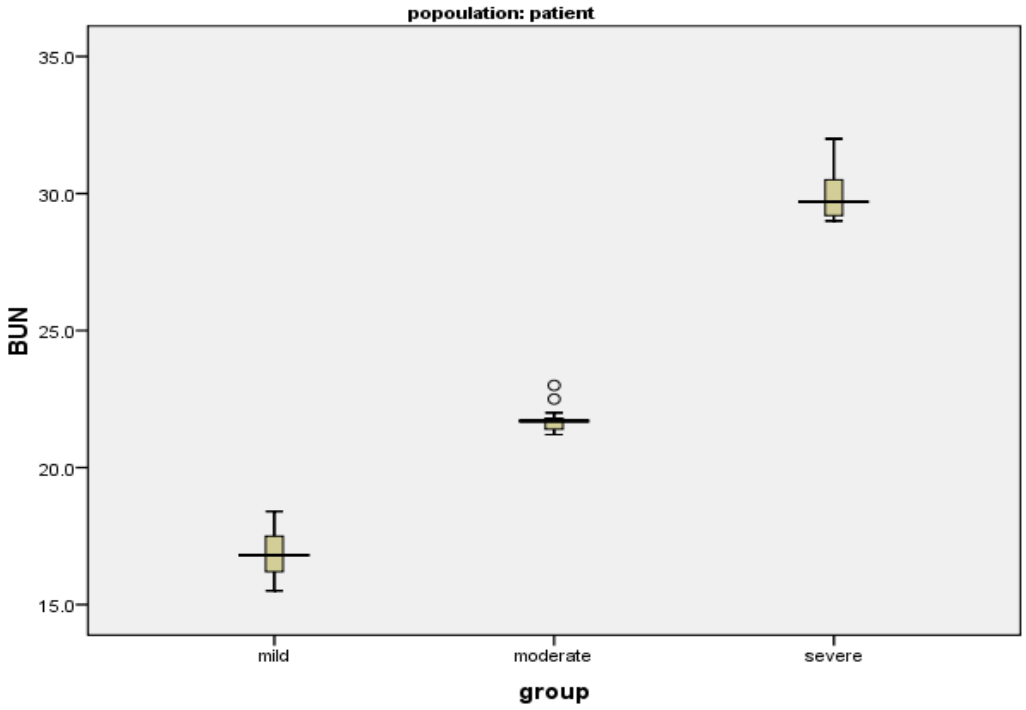

Figure (31)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards platelets

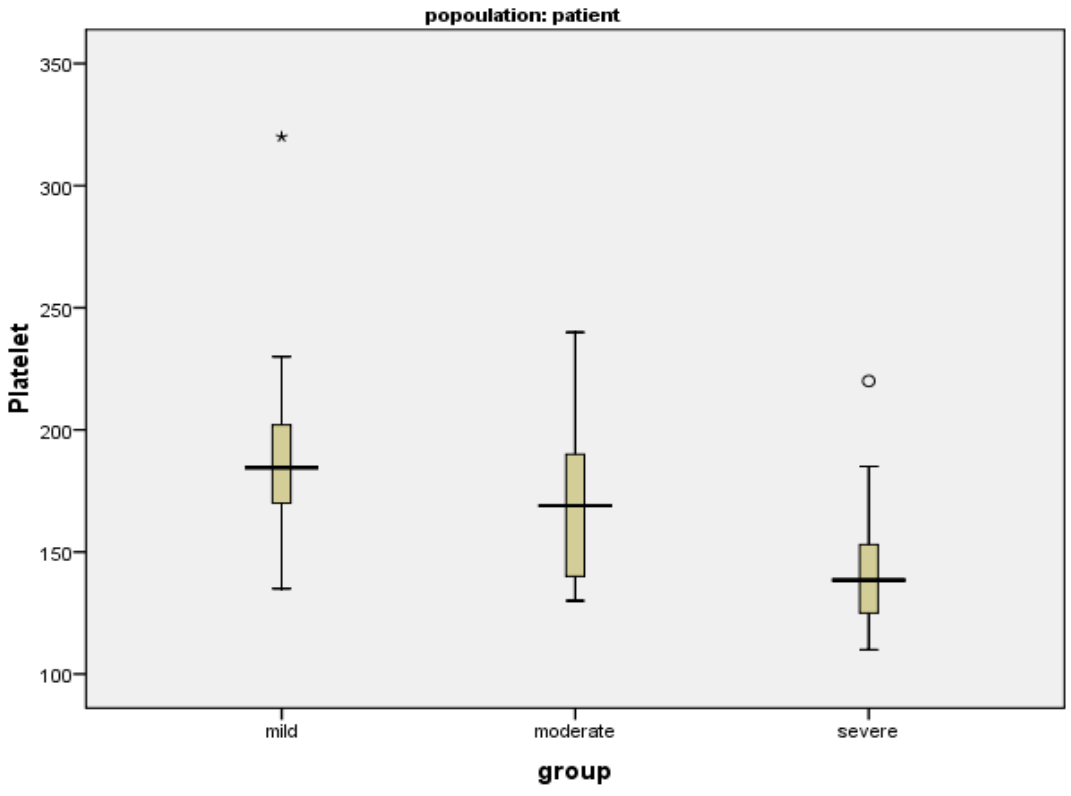

Figure (32)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards TLC

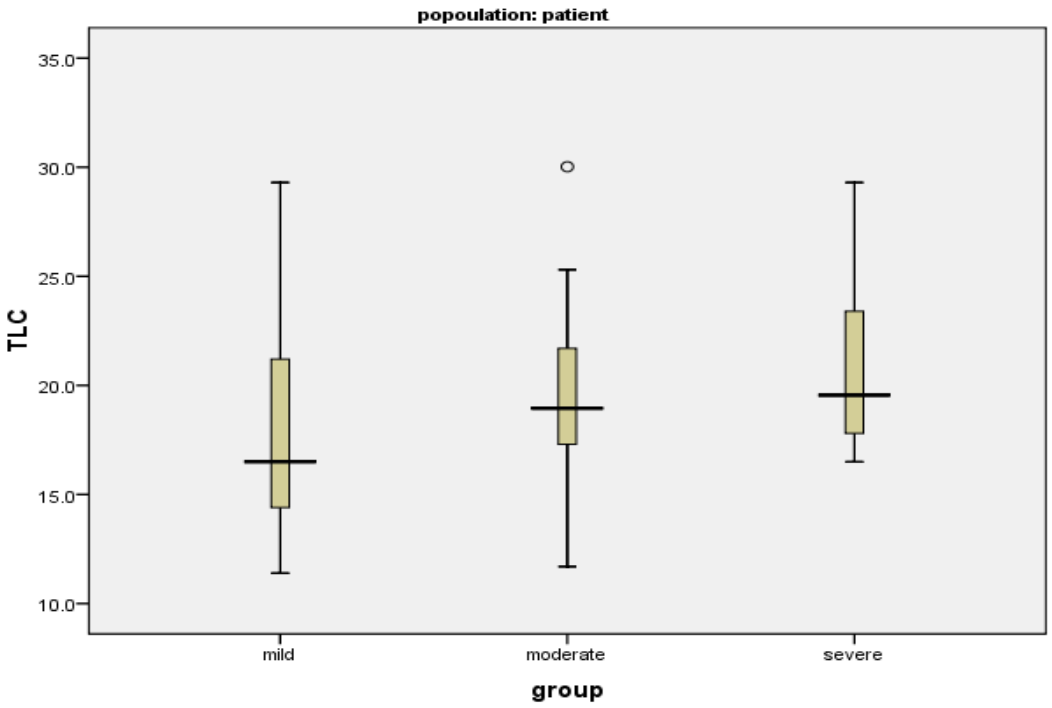

Figure (33)
Shows comparison between different patient groups (mild, moderate, severe) HIE as regards Apgar 5 minutes

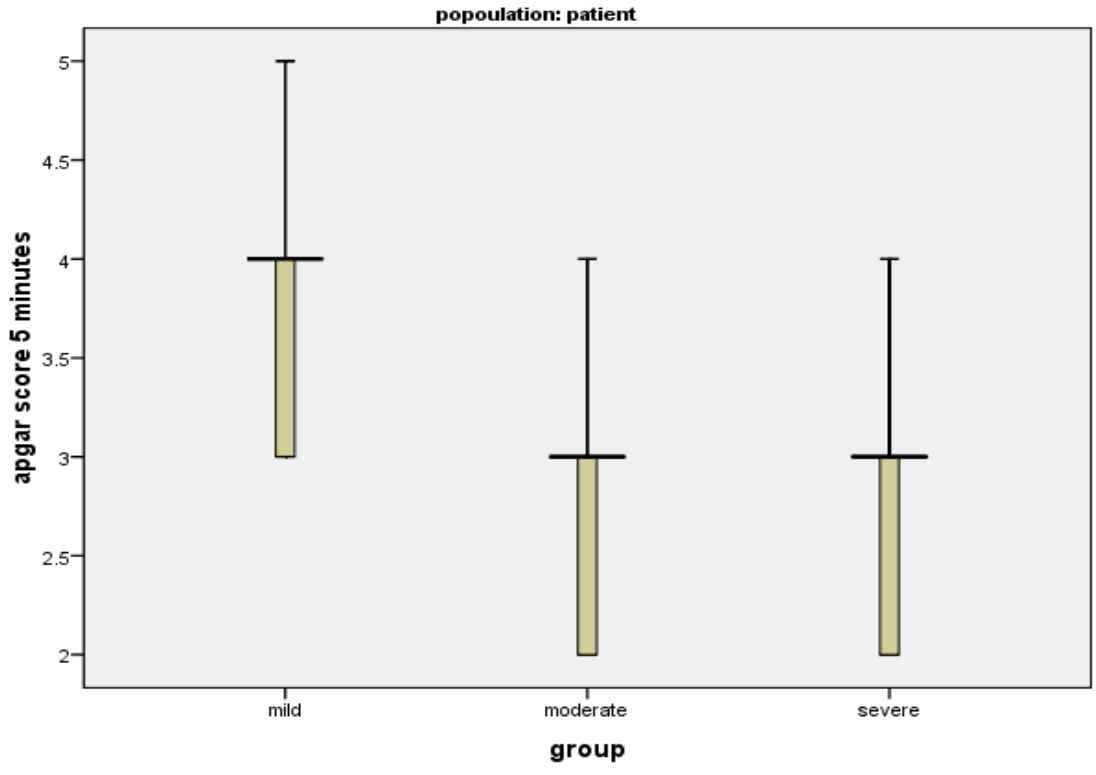

Table (7)

Comparative study between control group and patient group with mild HIE as regards ionized serum Ca^{+2} and total serum Mg levels

	Group				Test value	P value	Sig.
	control		Mild				
	Mean	Standard Deviation	Mean	Standard Deviation			
Ionized ca ++ mmol/l	1.26	.07	1.10	.05	8.73 T	.001	H.S.
Total serum Mg mg/dl	2.1	.3	1.9	.2	-.82 μ	.415	N.S

Table (7): Shows that ionized serum Ca^{+2} is highly significant lower in patients with mild HIE in comparison with control group

Table (8)

Comparative study between control group and patient group with moderate HIE as regards ionized serum Ca^{+2} and total serum Mg levels

	Group				Test value	P value	Sig.
	Control		moderate				
	Mean	Standard Deviation	Mean	Standard Deviation			
Ionized ca ++ mmol/l	1.26	.07	.96	.09	12.97 T	.001	H.S.
Total serum Mg mg/dl	2.1	.3	1.5	.1	-5.70 μ	.001	H.S.

Table (8): Shows that both ionized serum Ca^{+} and total serum Mg are highly significant lower in patients with moderate HIE in comparison with control group

Table (9)

Comparative study between control group and patient group with severe HIE as regards ionized serum Ca^{+2} and total serum Mg levels

	Group				Test value	P value	Sig.
	control		severe				
	Mean	Standard Deviation	Mean	Standard Deviation			
Ionized ca ++ mmol/l	1.26	.07	.82	.13	10.45 T	.001	H.S.
Total serum Mg mg/dl	2.1	.3	1.2	.1	-4.69 μ	.001	H.S.

Table (9): Shows that both ionized serum Ca^{+2} and total serum Mg are highly significant lower in patients with severe HIE in comparison with control group

Table (10)

Comparative study between patient groups with mild and moderate HIE as regards ionized serum Ca^{+2} and total serum Mg levels

	Group				Test value	P value	Sig.
	mild		moderate				
	Mean	Standard Deviation	Mean	Standard Deviation			
Ionized ca ++ mmol/l	1.10	.05	.96	.09	6.03 T	.001	H.S.
Total serum Mg mg/dl	1.9	.2	1.5	.1	-4.88 μ	.001	H.S.

Table (10): Shows that both ionized serum ca^{+2} and total serum Mg are highly significant lower in patients with moderate HIE in comparison with patient with mild HIE

Table (11)

Comparative study between patient groups with mild and severe HIE as regards ionized serum Ca^{+2} and total serum Mg levels

	Group				Test value	P value	Sig.
	mild		Severe				
	Mean	Standard Deviation	Mean	Standard Deviation			
Ionized ca ++ mmol/l	1.10	.05	.82	.13	6.87 **T**	.001	H.S.
Total serum Mg mg/dl	1.9	.2	1.2	.1	-4.31 **μ**	.001	H.S.

Table (11): Shows that both ionized serum Ca^{+2} and total serum Mg are highly significant lower in patients with severe HIE in comparison with patients with mild HIE

Table (12)

Comparative study between patient groups with moderate and severe HIE as regards ionized serum Ca^{+2} and total serum Mg levels

	Group				Test value	P value	Sig.
	moderate		Severe				
	Mean	Standard Deviation	Mean	Standard Deviation			
Ionized ca ++ mmol/l	.96	.09	.82	.13	3.45 **T**	.002	H.S.
Total serum Mg mg/dl	1.5	.1	1.2	.1	-3.93 **T**	.001	H.S.

T Tested by unpaired t-test
μ Tested by Mann-Whitney test.

Table (12): Shows that both ionized serum Ca^{+2} and total serum Mg are highly significant lower in patients with severe HIE in comparison with patients with moderate HIE

Figure (34)
Shows comparison between control group and patient groups (mild, moderate and severe) HIE as regards total serum Mg

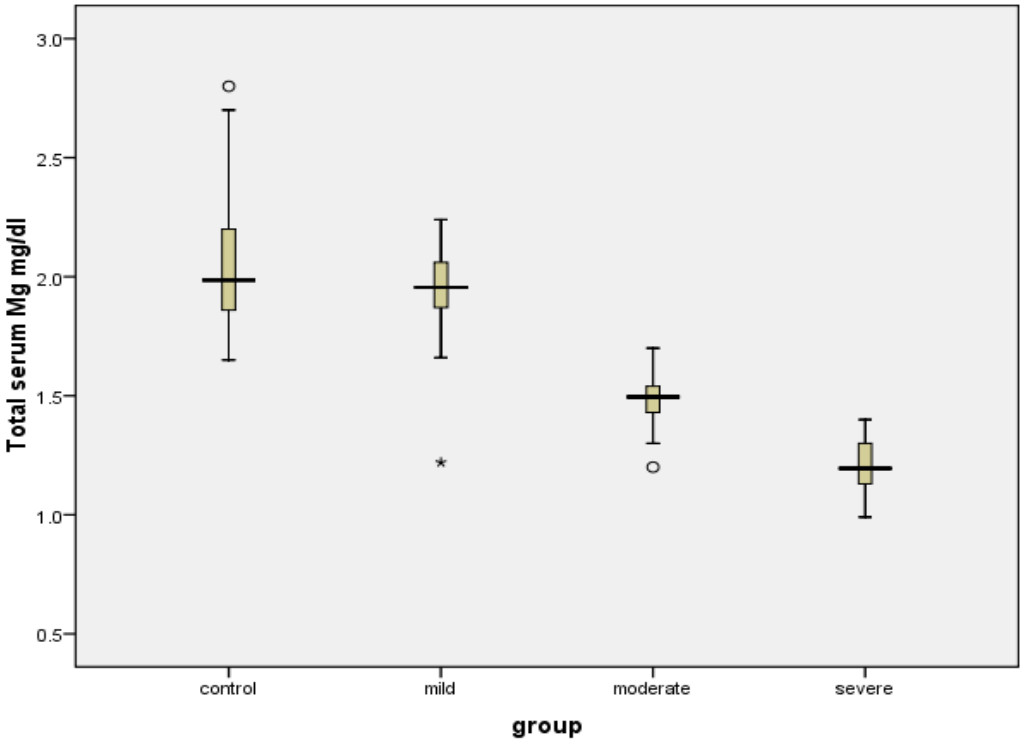

Figure (35)
Shows comparison between control group and patient groups (mild, moderate and severe) HIE as regards ionized serum Ca^{+2}

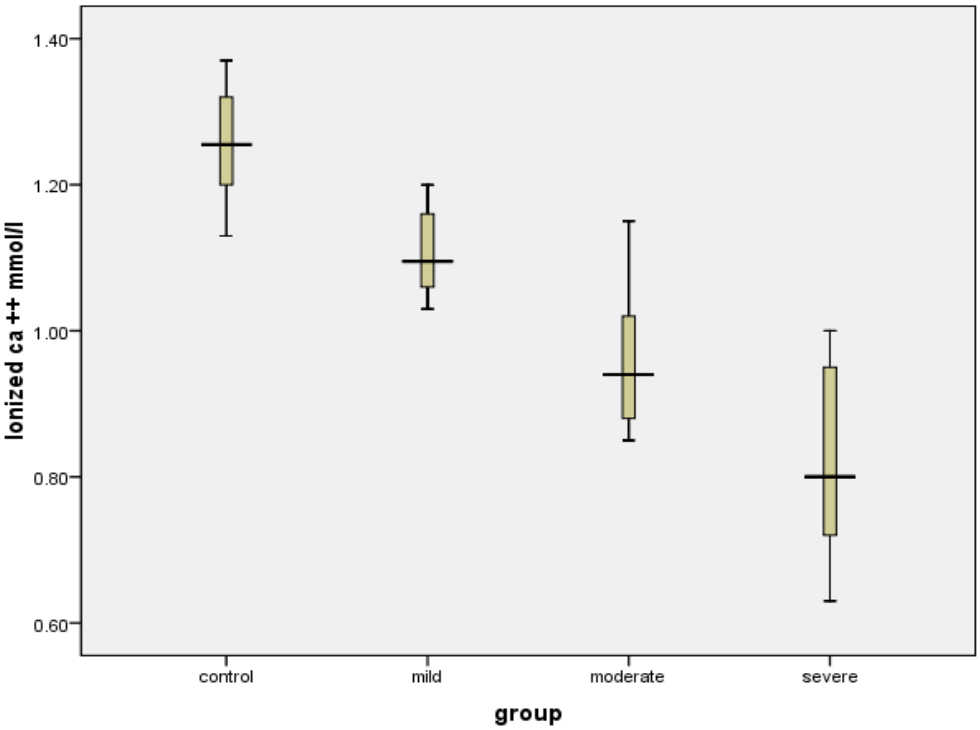

Table (13)

Correlations between ionized serum Ca^{+2}, total serum Mg, some clinical data and different lab data

Correlations

		Ionized ca ++ mmol/l	Total serum Mg mg/dl
Mean gestational age (weeks)	Pearson Correlation	-.021-	-.028-
	Sig. (2-tailed)	.852	.803
		N.S.	N.S.
Mean birth weight (Kg)	Pearson Correlation	-.040-	-.019-
	Sig. (2-tailed)	.726	.867
		N.S.	N.S.
apgar score 1 minute	Pearson Correlation	**.710****	**.540****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
apgar score 5 minutes	Pearson Correlation	**.769****	**.596****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
TLC	Pearson Correlation	**.387****	**.294***
	Sig. (2-tailed)	**.001**	**.008**
		H.S	H.S.
HB	Pearson Correlation	.177	.205
	Sig. (2-tailed)	.117	.068
		N.S	N.S
Platelet	Pearson Correlation	**.599****	**.529****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
Urea	Pearson Correlation	**-.855****	**-.694****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
Creatinin	Pearson Correlation	.037	.115
	Sig. (2-tailed)	.745	.308
		N.S	N.S
BUN	Pearson Correlation	**-.882****	**-.795****
	Sig. (2-tailed)	**.001**	**.001**

		H.S	H.S
Na+	Pearson Correlation	**.834****	**.704****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
K+	Pearson Correlation	**-.147**	**.234***
	Sig. (2-tailed)	**.192**	**.037**
		N.S	S
ALT	Pearson Correlation	**-.831****	**-.765****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
AST	Pearson Correlation	**-.820****	**-.744****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
PH	Pearson Correlation	**.226***	.218
	Sig. (2-tailed)	**.044**	.053
		S.	N.S.
PCO2	Pearson Correlation	**-.777****	**-.631****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
HCO3	Pearson Correlation	**.873****	**.767****
	Sig. (2-tailed)	**.001**	**.001**
		H.S	H.S
Ionized ca ++ mmol/l	Pearson Correlation		**.782****
	Sig. (2-tailed)		**.001**
			H.S
Total serum Mg mg/dl	Pearson Correlation	**.782****	
	Sig. (2-tailed)	**.001**	
		H.S	

**. Correlation is highly significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table (13): Shows correlations between ionized serum Ca^{+2}, total serum Mg ,mean gestational age, mean gestational weight (Kg), Apgar score 1, 5 minutes, different parameters of CBC and ABG

Table (14)

Correlation between ionized serum Ca^{+2} and total serum Mg as regards control group

Correlations group = control

		Total serum Mg mg/dl
Ionized ca ++ mmol/l	Pearson Correlation	.588**
	Sig. (2-tailed)	.001
	N	H.S

**. Correlation is significant at the 0.01 level (2-tailed).

Table (14): Shows that there is highly significant correlation between ionized serum Ca^{+2} and total serum Mg as regards control group.

Table (15)

Correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with mild hypoxia

Correlations group = mild

		Total serum Mg mg/dl
Ionized ca ++ mmol/l	Pearson Correlation	.523*
	Sig. (2-tailed)	.013
	N	S

*. Correlation is significant at the 0.05 level (2-tailed).

Table (15): Shows that there is significant correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with mild hypoxia.

Table (16)

Correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with moderate hypoxia

Correlations group = moderate

		Total serum Mg mg/dl
Ionized ca ++ mmol/l	Pearson Correlation	-.051-
	Sig. (2-tailed)	.840
	N	N.S

Table (16): Shows that there is no significant correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with moderate hypoxia.

Table (17)

Correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with severe hypoxia

Correlations group = severe

		Total serum Mg mg/dl
Ionized ca ++ mmol/l	Pearson Correlation	-.331-
	Sig. (2-tailed)	.350
	N	N.S

Table (17): Shows that there is no significant correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with severe hypoxia.

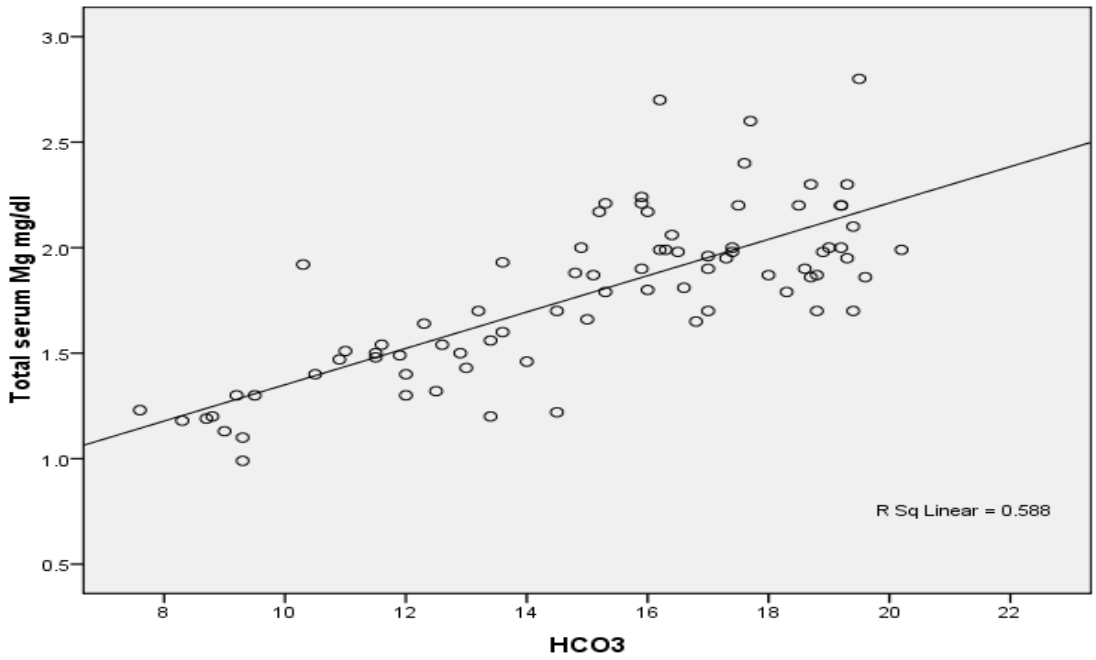

Figure (36)
Shows that there is positive correlation between HCo_3 and total serum Mg

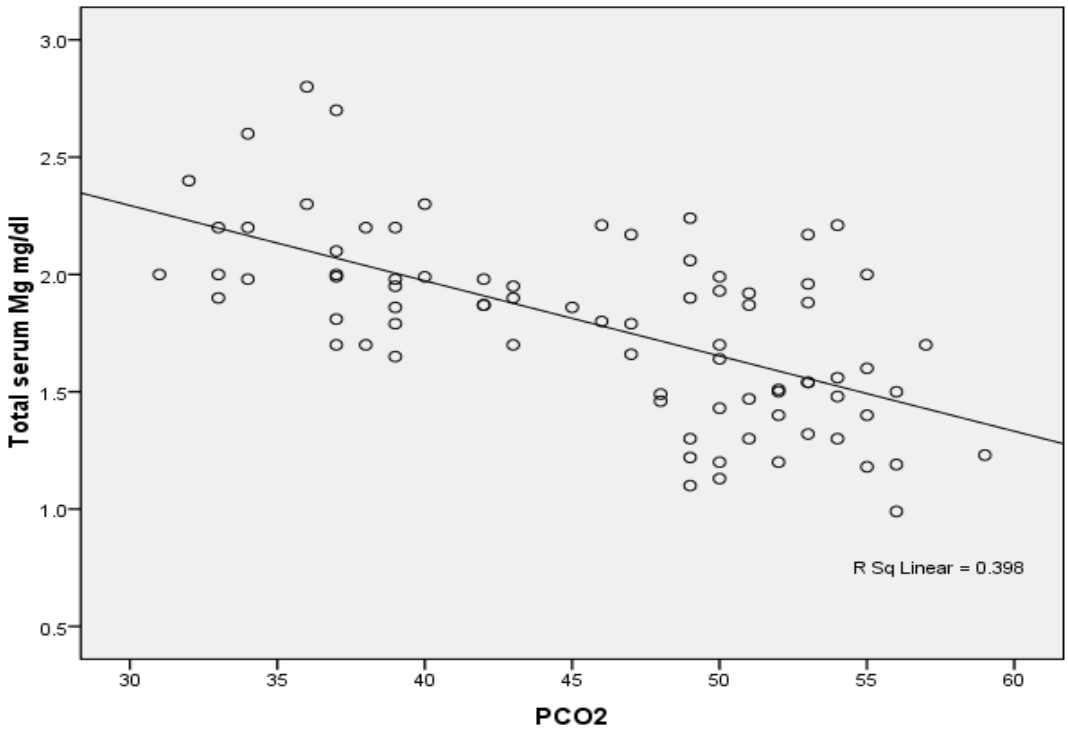

Figure (37)
Shows that there is negative correlation between total serum Mg and PCO_2

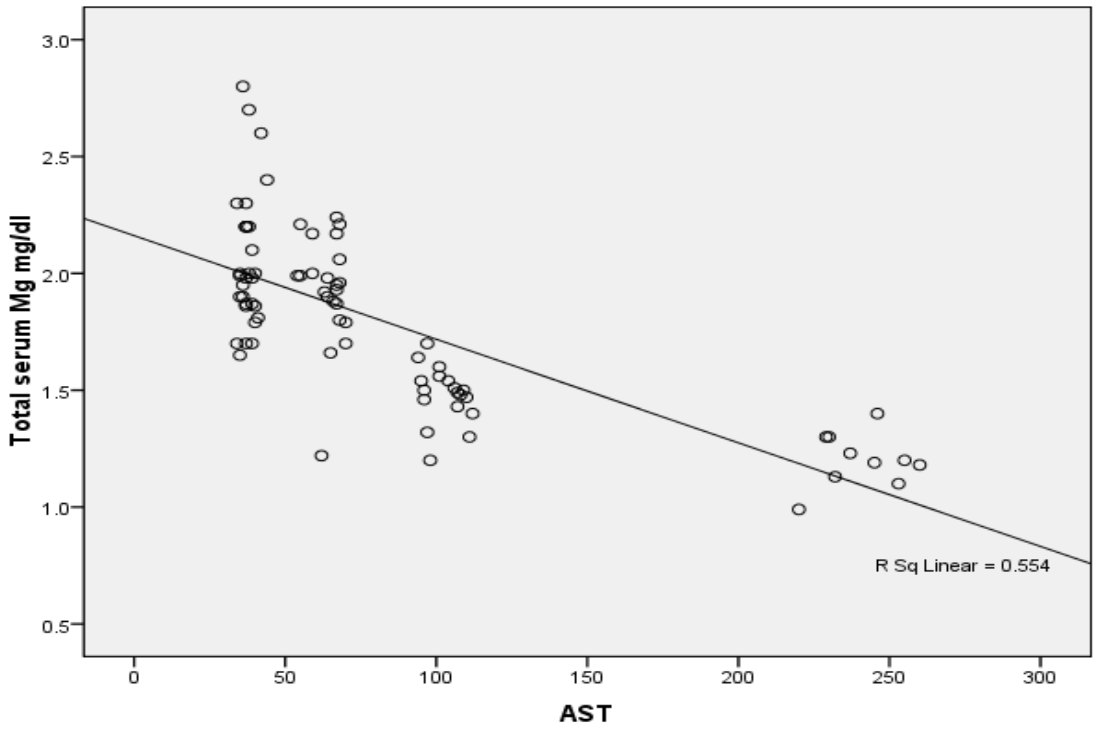

Figure (38)
Shows that there is negative correlation between AST and total serum Mg

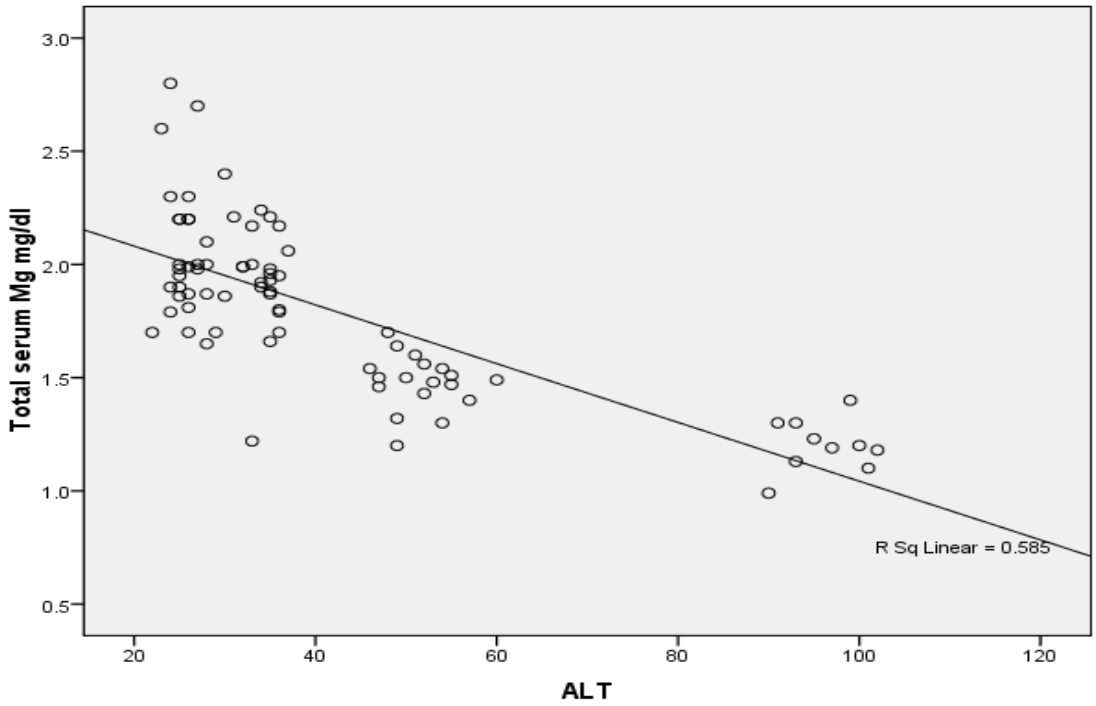

Figure (39)
Shows that there is negative correlation between ALT and total serum Mg

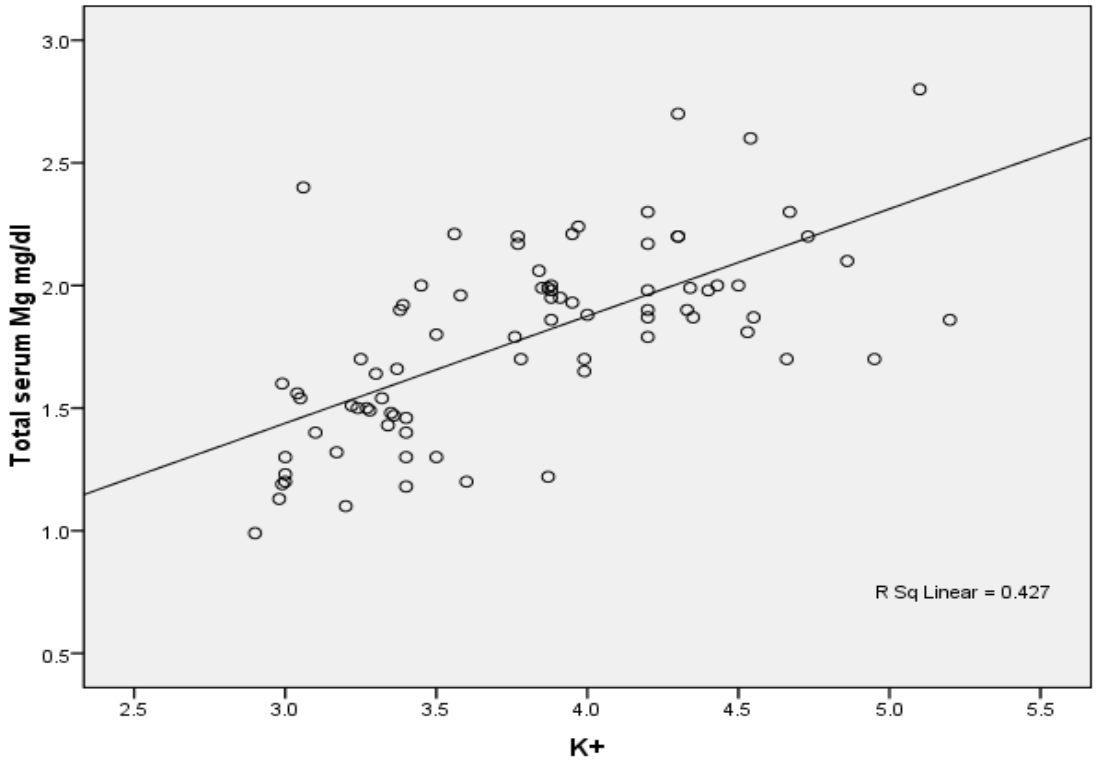

Figure (40)
Shows that there is positive correlation between K^+ and total serum Mg

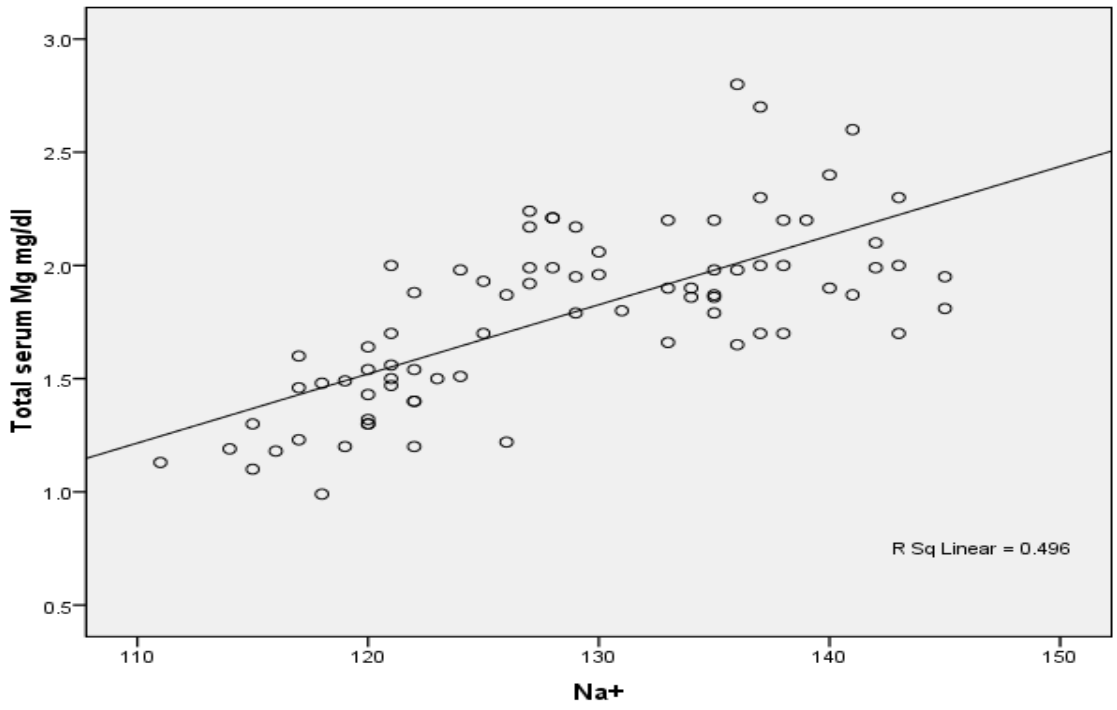

Figure (41)
Shows that there is positive correlation between Na^+ and total serum Mg

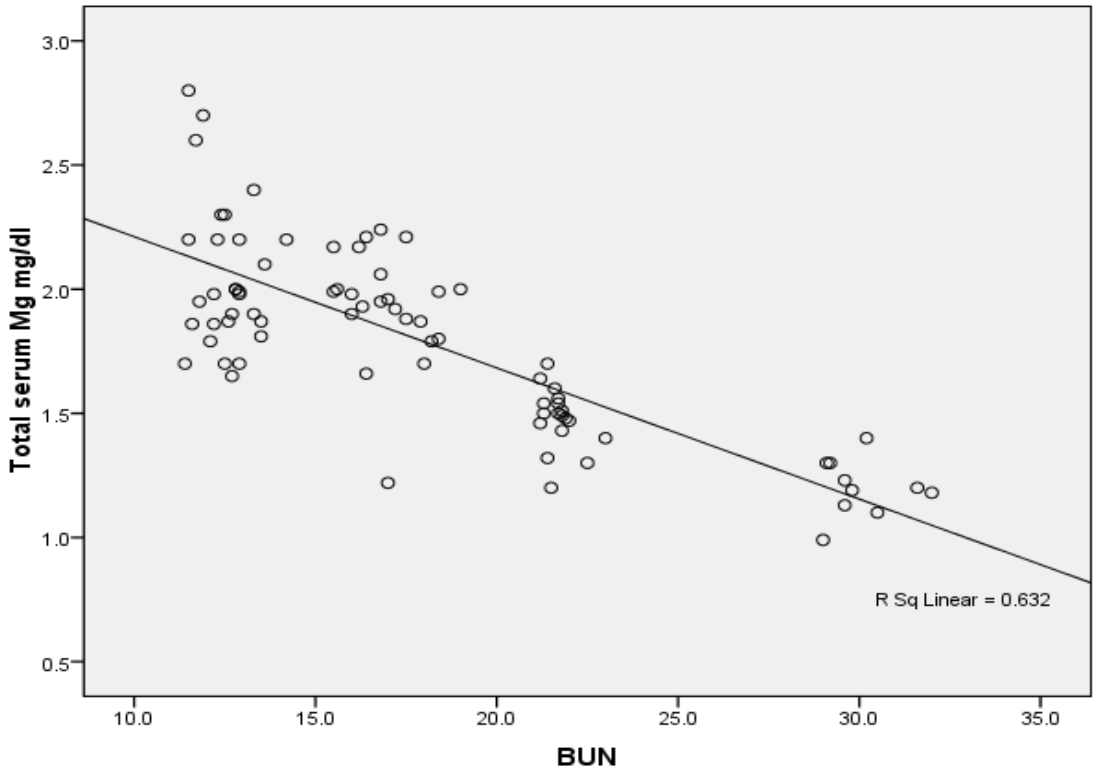

Figure (42)
Shows that there is negative correlation between BUN and total serum Mg

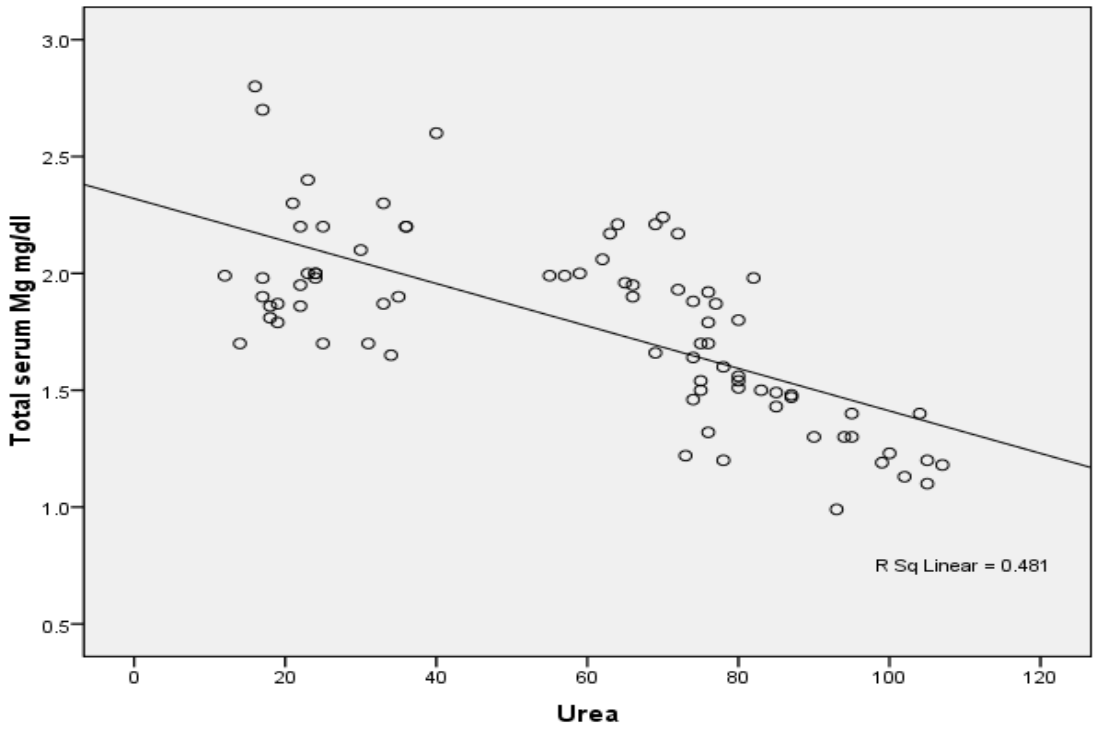

Figure (43)
Shows that there is negative correlation between urea and total serum Mg

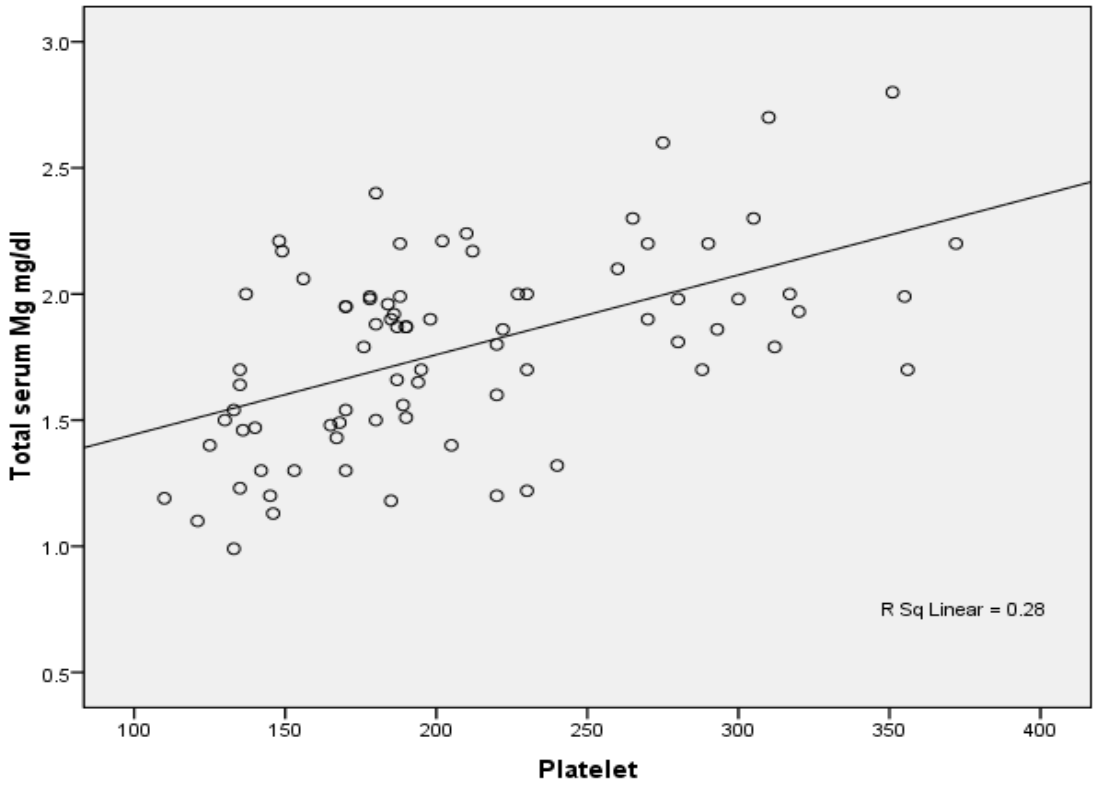

Figure (44)
Shows that there is positive correlation between platelets and total serum Mg

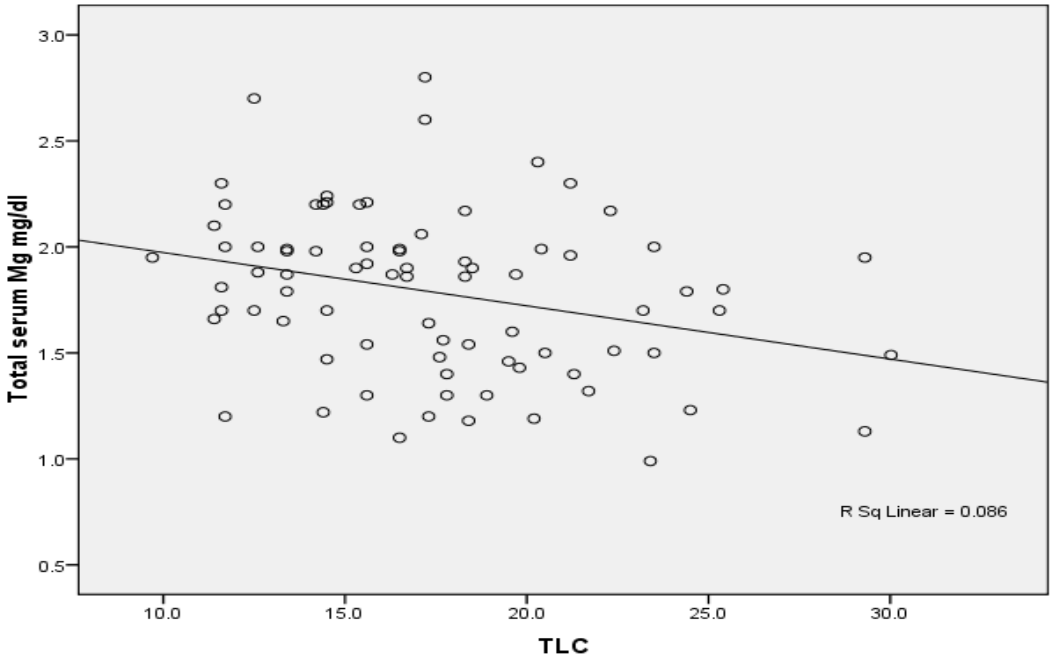

Figure (45)
Shows that there is negative correlation between TLC and total serum Mg

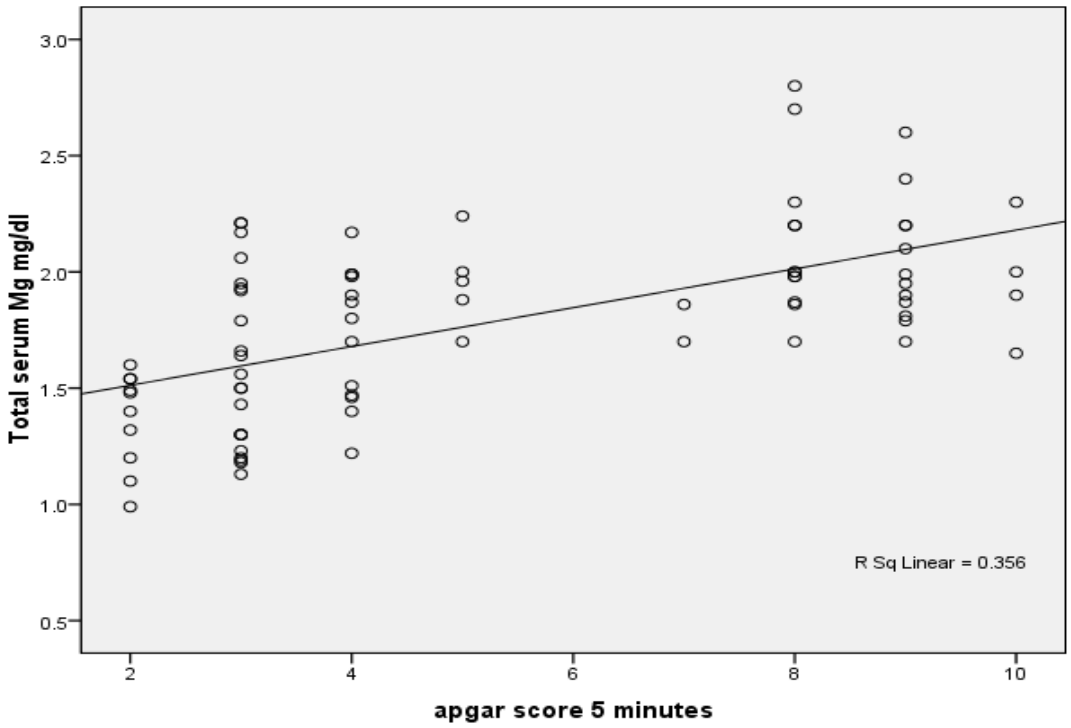

Figure (46)
Shows that there is positive correlation between Apgar score 5 minutes and total serum Mg

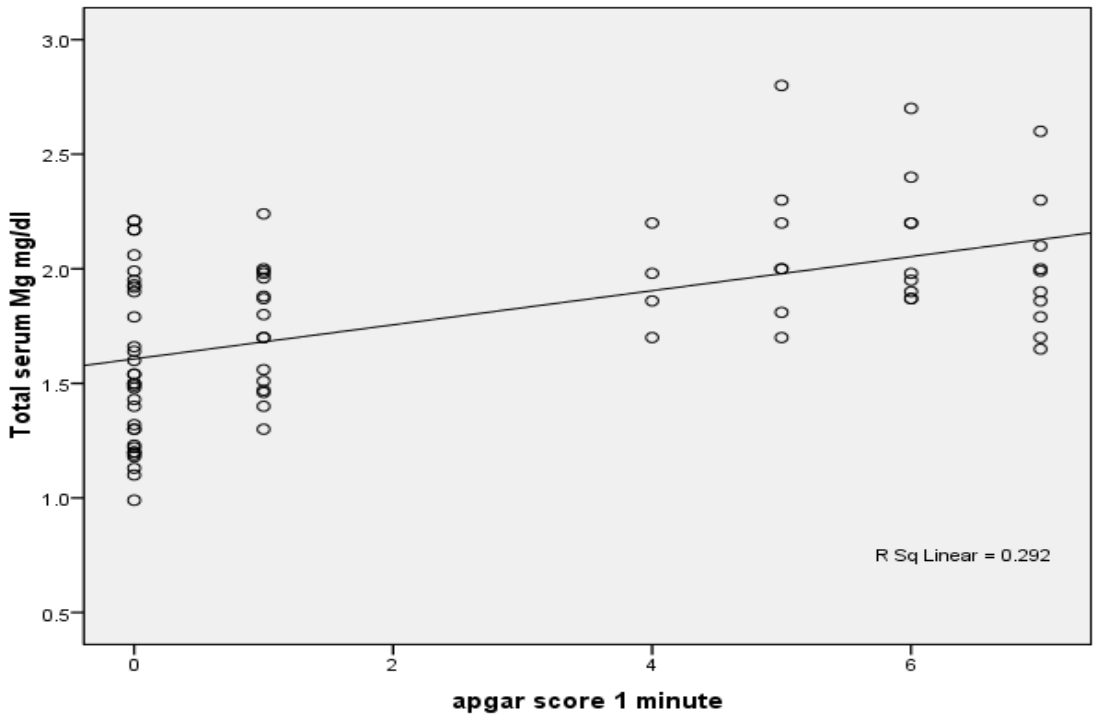

Figure (47)
Shows that there is positive correlative between Apgar score 1 minute and total serum Mg

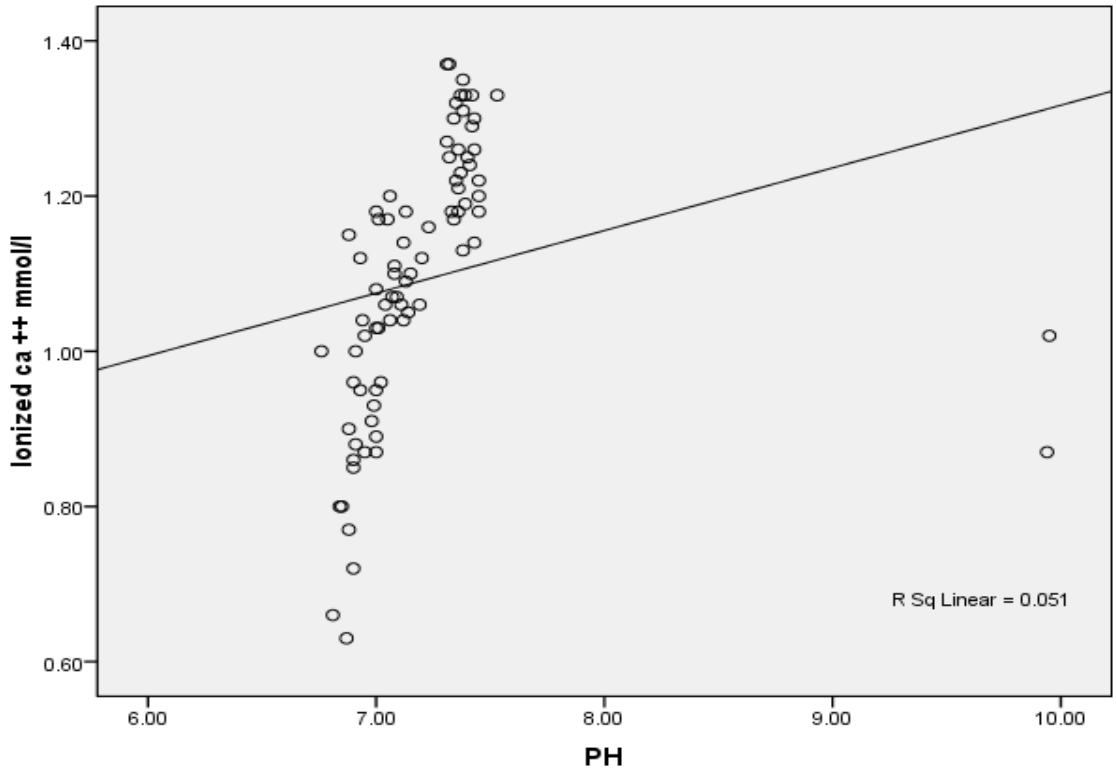

Figure (48)
Shows that there is positive correlation between PH and ionized serum Ca^{+2}

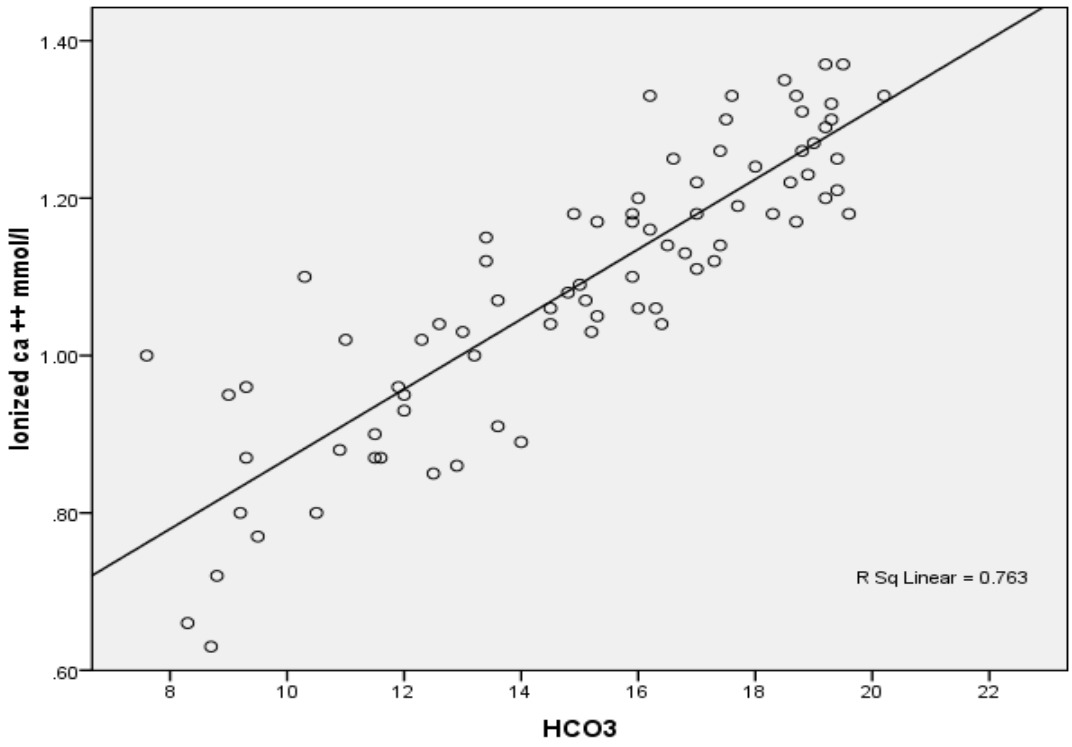

Figure (49)
Shows that there is positive correlation between HCO_3 and ionized serum Ca^{+2}

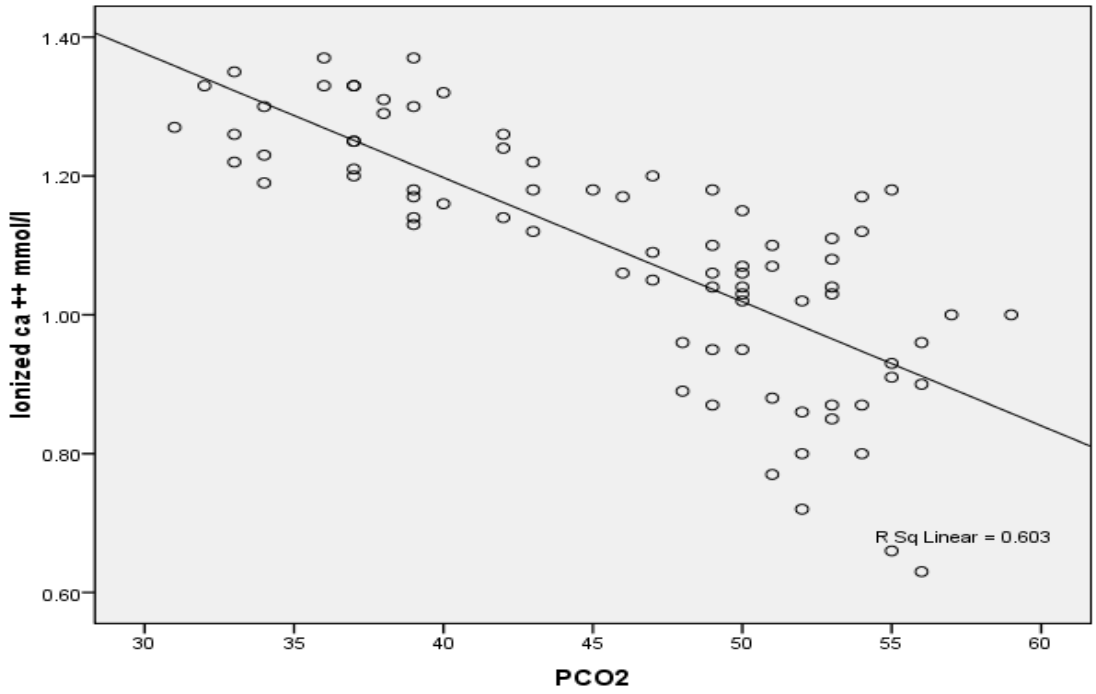

Figure (50)
Shows that there is negative correlation between PCO_2 and ionized serum Ca^{+2}

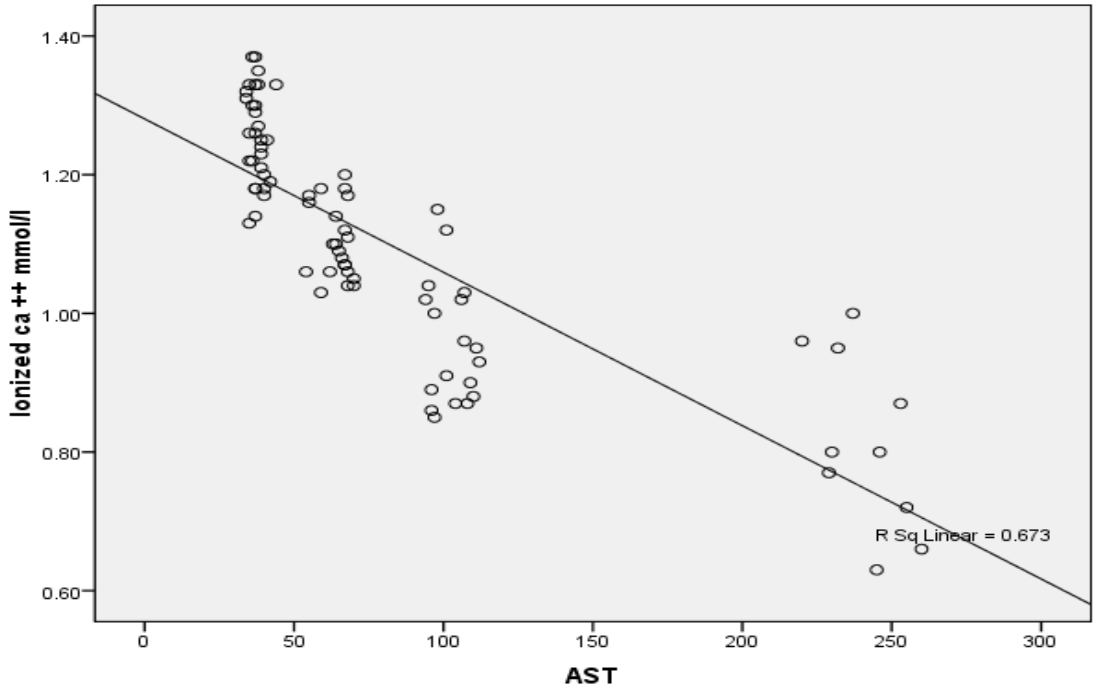

Figure (51)
Shows that there is negative correlation between AST and ionized serum Ca^{+2}

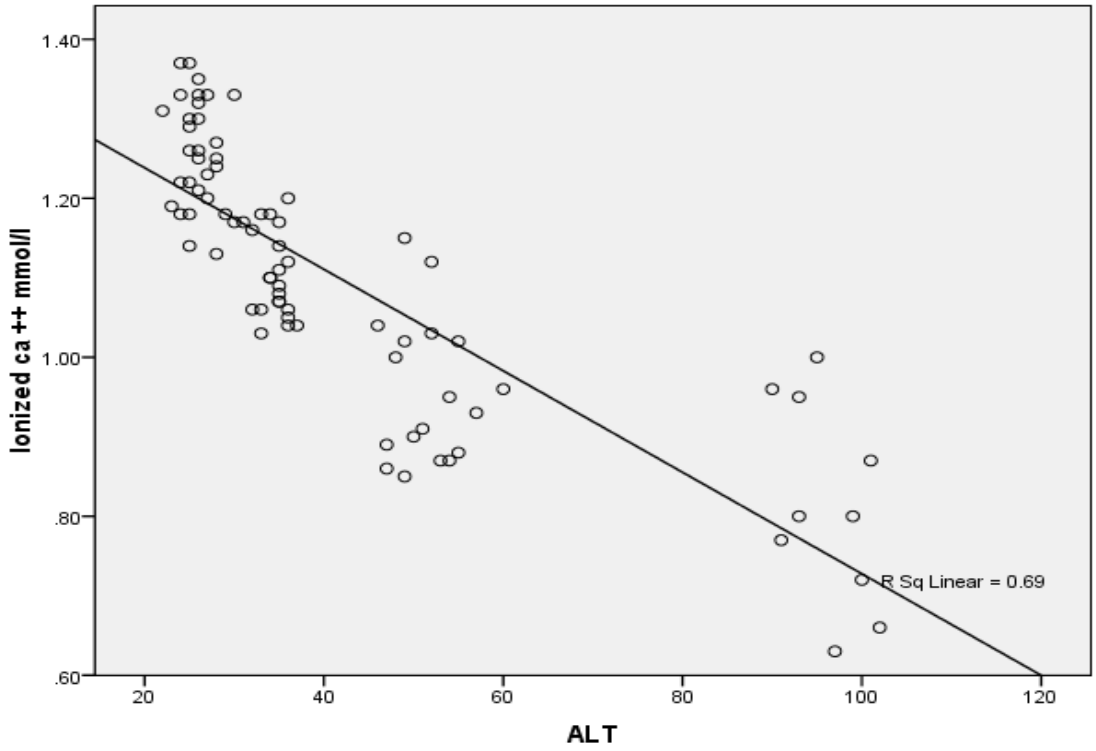

Figure (52)
Shows that there is negative correlation between ALT and ionized serum Ca^{+2}

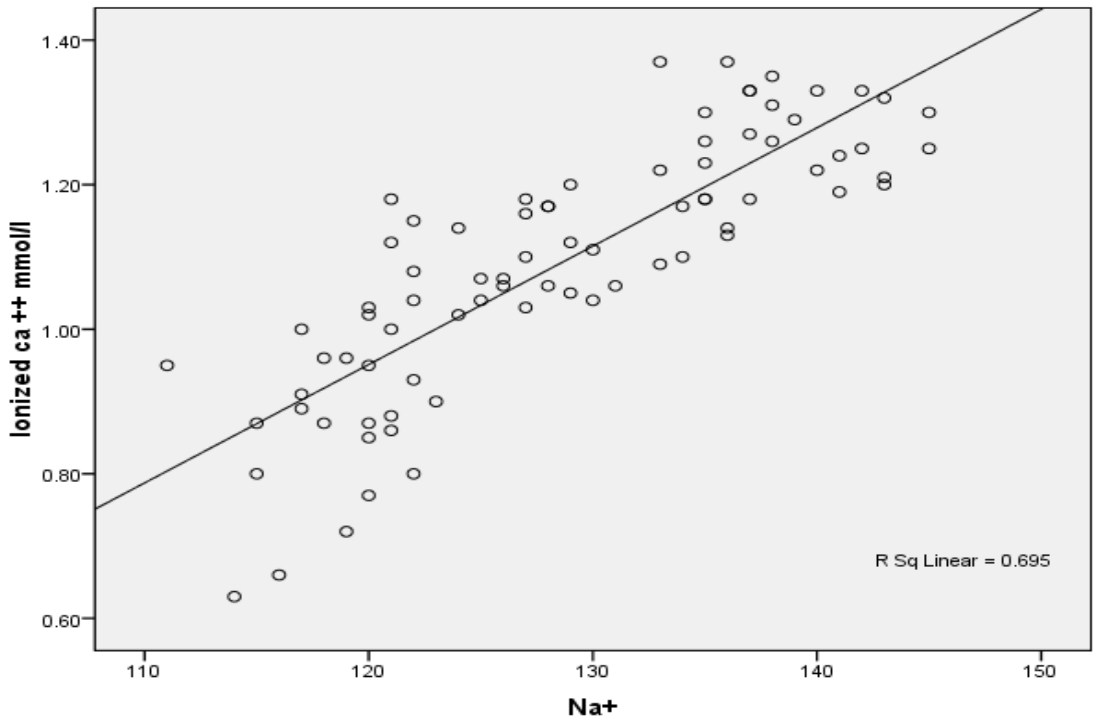

Figure (53)
Shows that there is positive correlation between Na^{+} and ionized serum Ca^{+2}

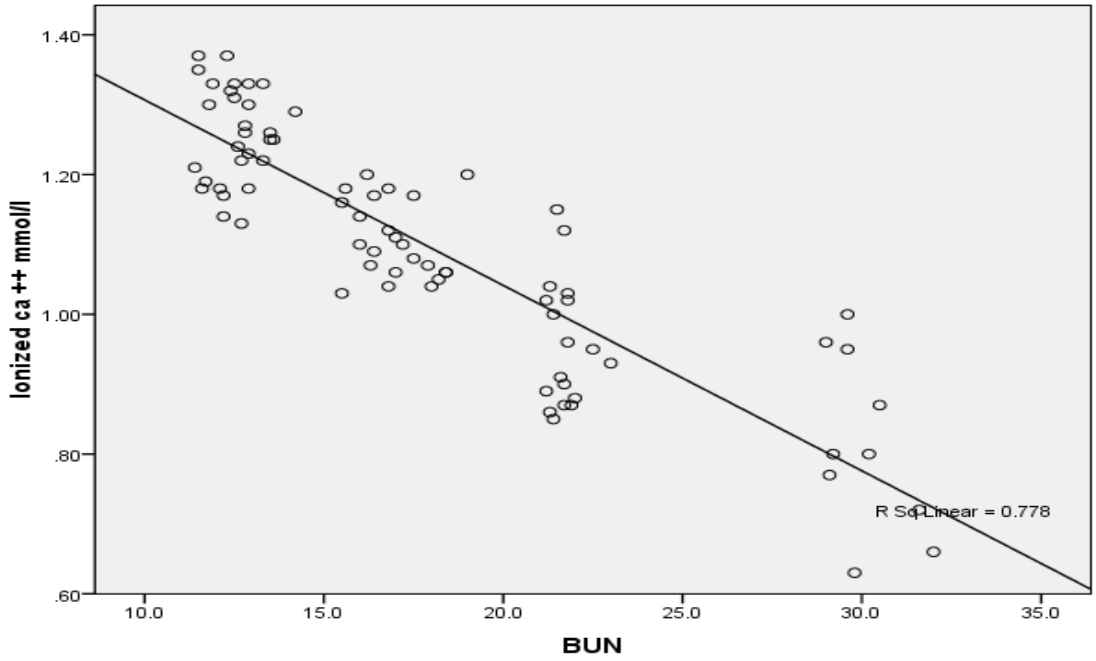

Figure (54)
Shows that there is negative correlation between BUN and ionized serum Ca^{+2}

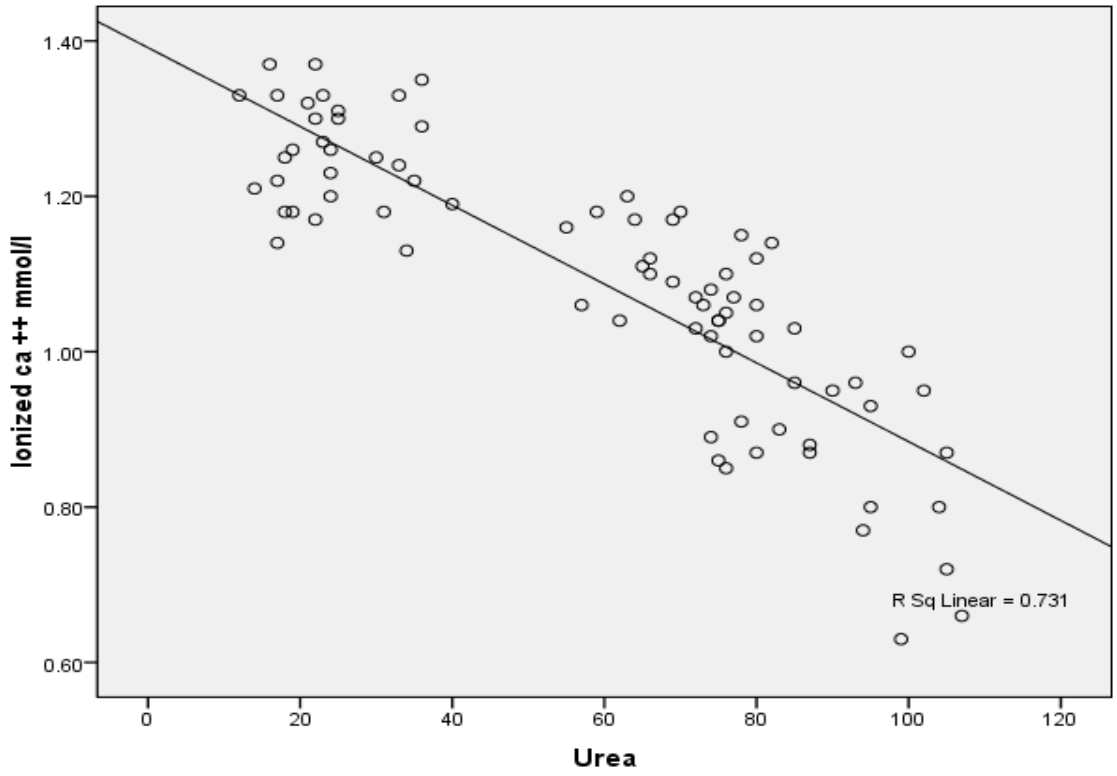

Figure (55)
Shows that there is negative correlation between urea and ionized serum Ca^{+2}

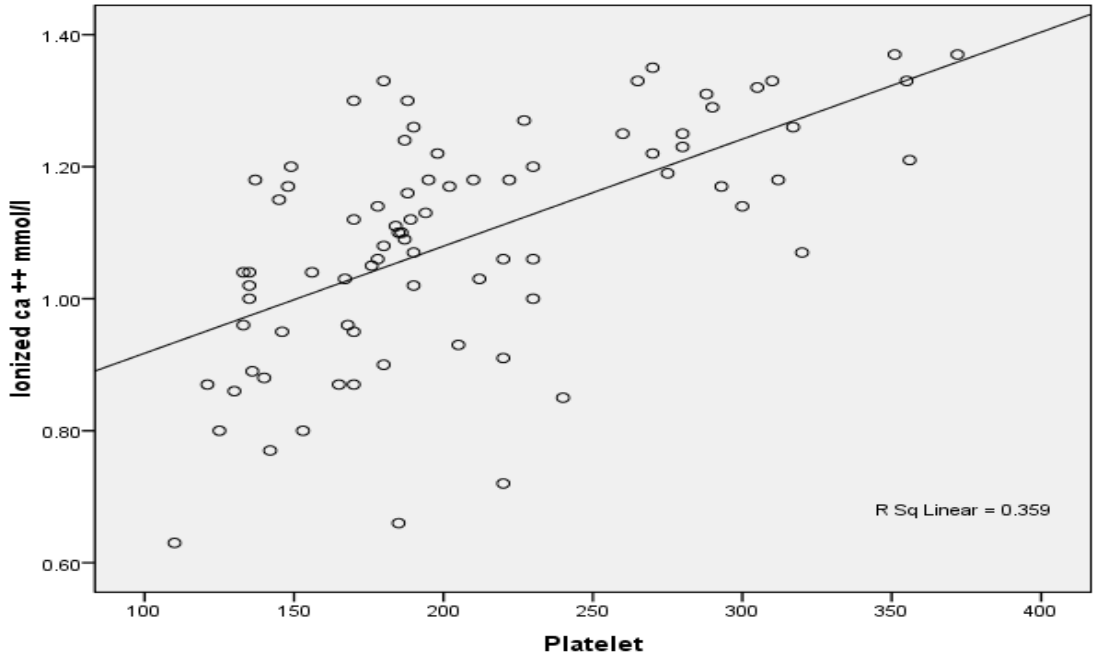

Figure (56)
Shows that there is positive correlation between platelets and ionized serum Ca^{+2}

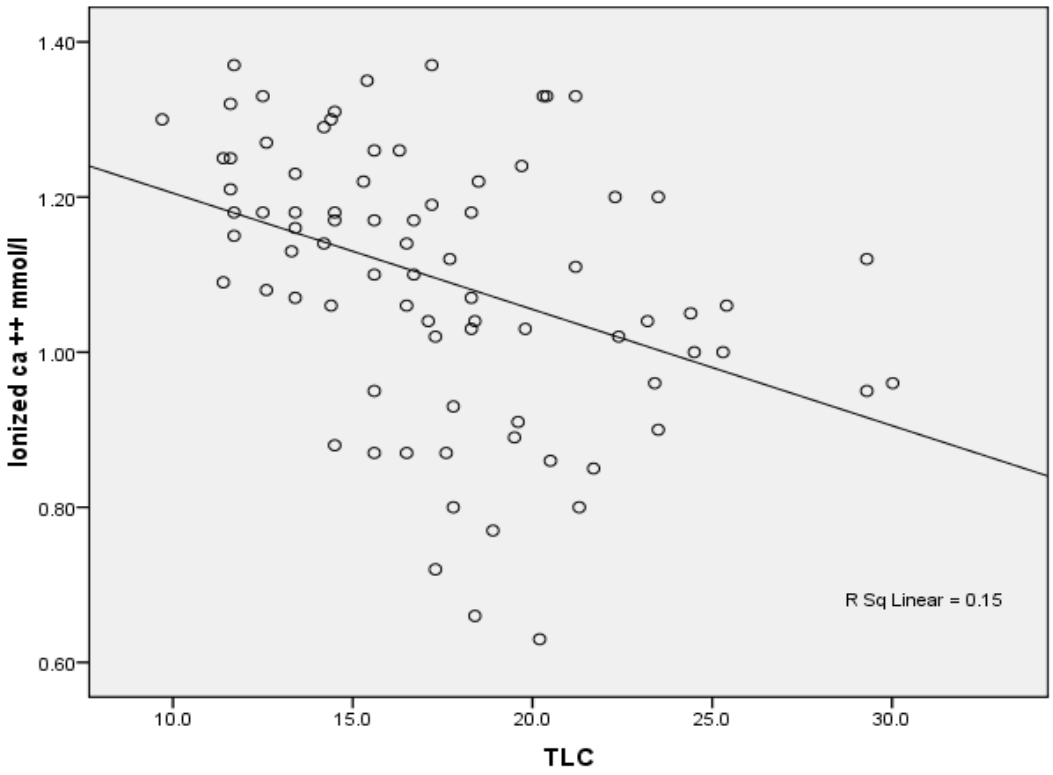

Figure (57)
Shows that there is negative correlation between TLC and ionized serum Ca^{+2}

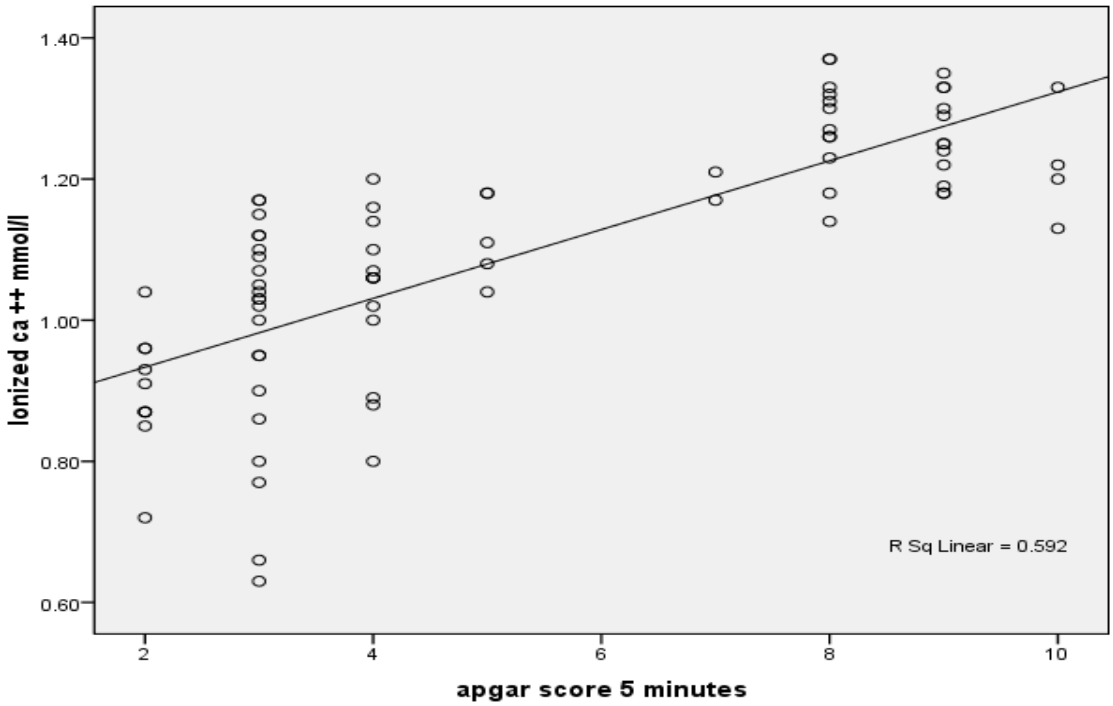

Figure (58)
Shows That there is positive correlation between Apgar score 5 minutes and ionized serum Ca^{+2}

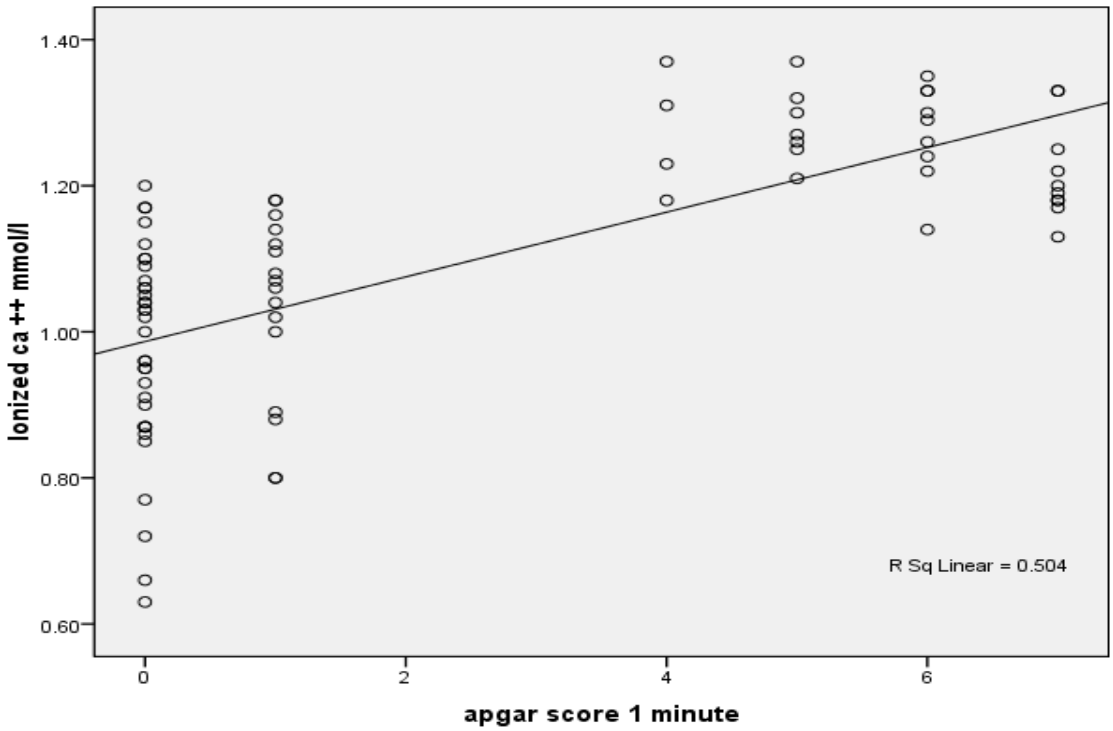

Figure (59)
Shows that there is positive correlation between Apgar score 1 minute and ionized serum Ca^{+2}

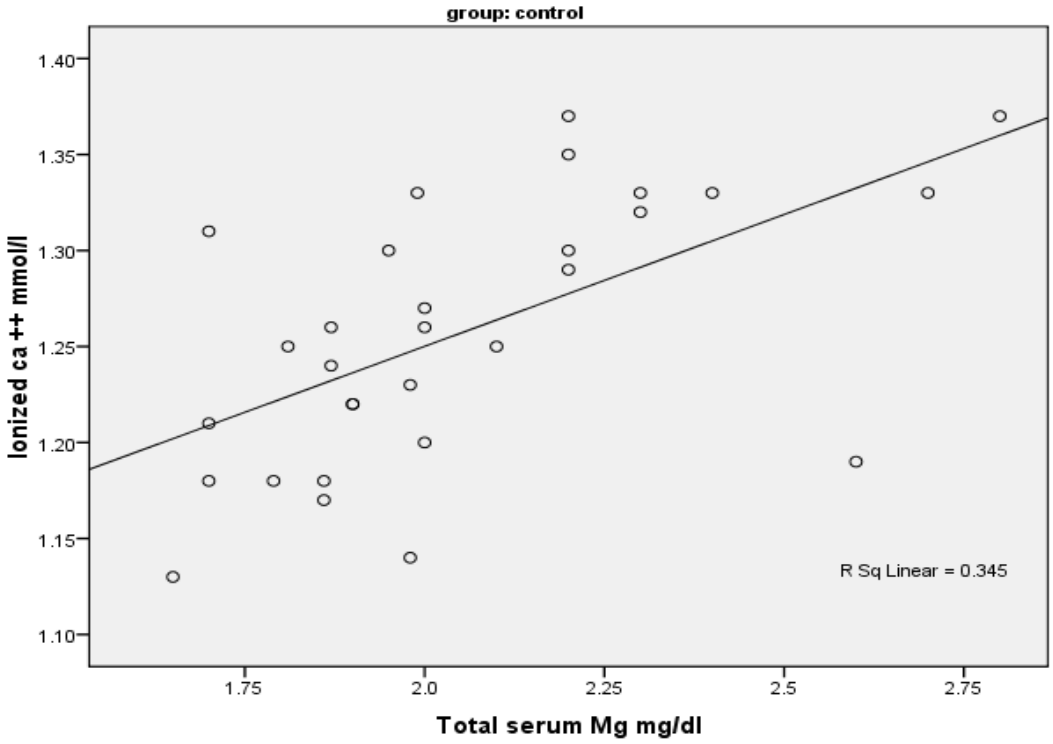

Figure (60)
Shows that there is positive correlation between ionized serum Ca^{+2} and total serum Mg as regards control group.

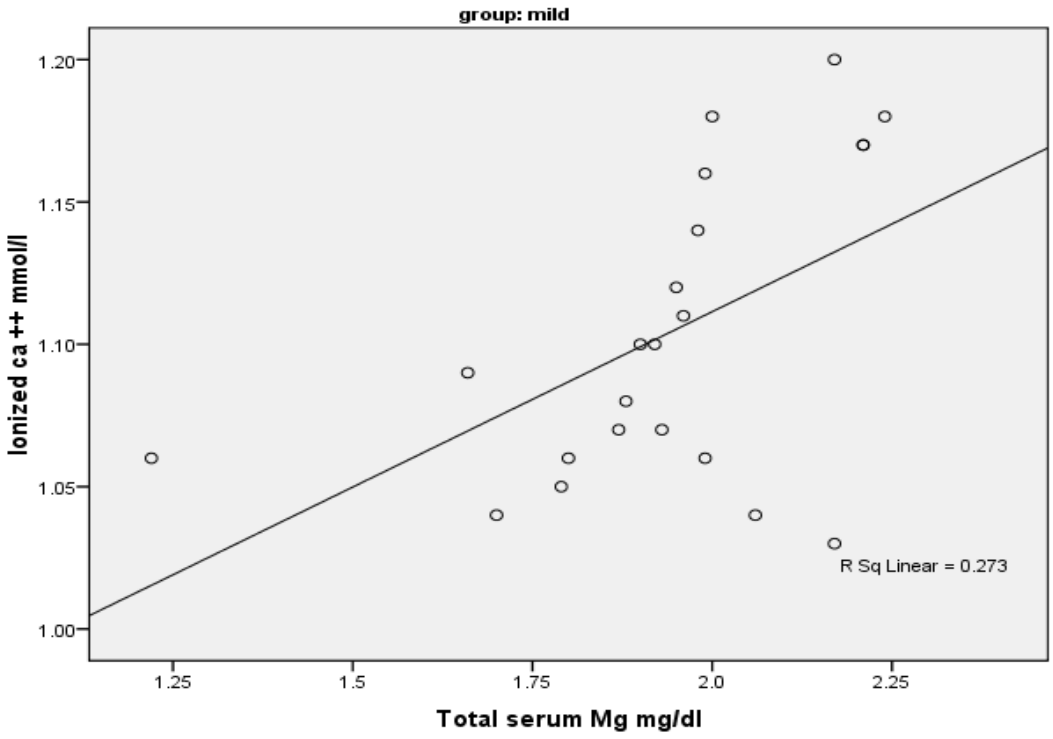

Figure (61)
Shows that there is positive correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with mild hypoxia.

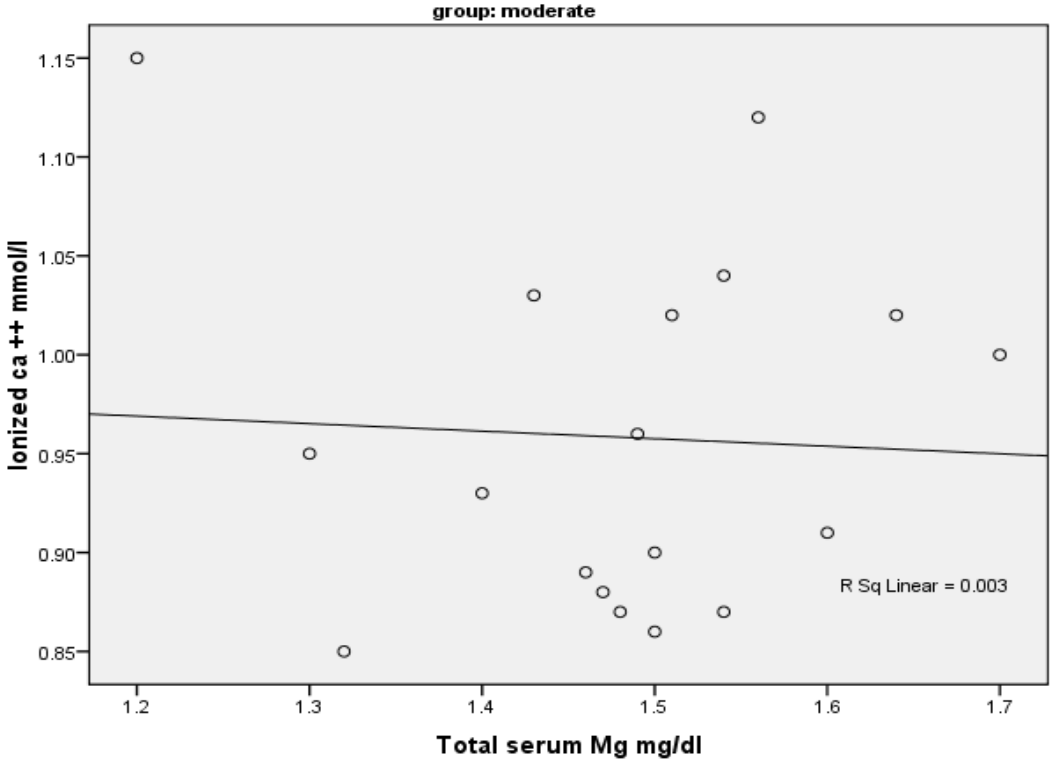

Figure (62)
Shows that there is negtive correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with moderate hypoxia.

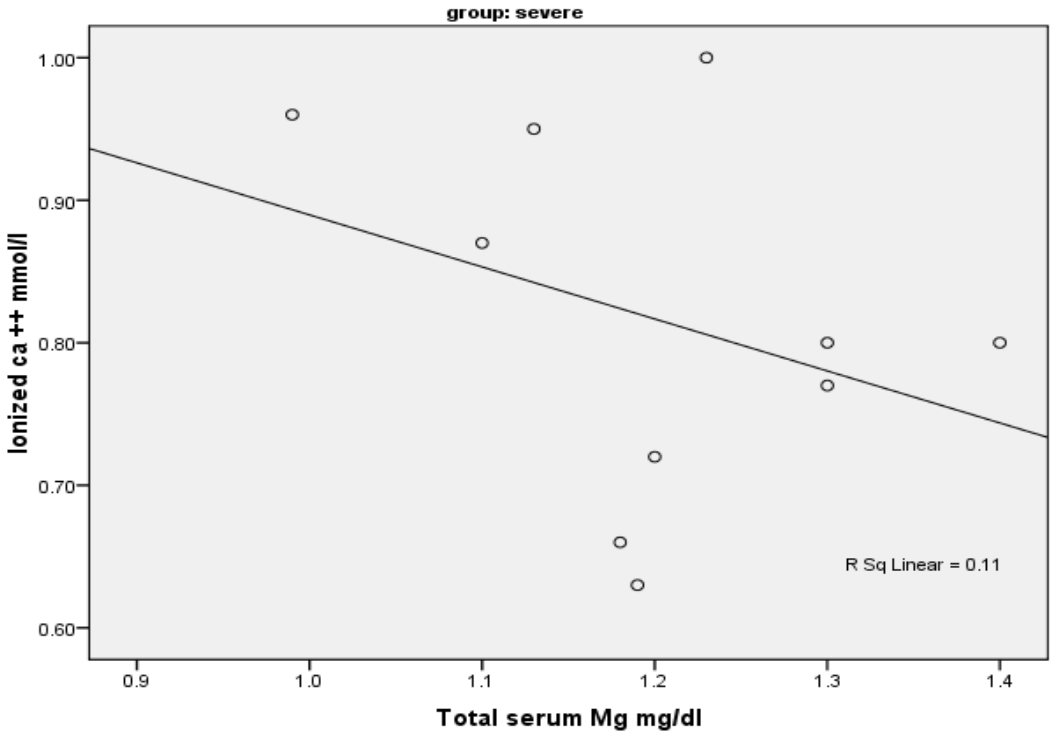

Figure (63)
Shows that there is negtive correlation between ionized serum Ca^{+2} and total serum Mg as regards patient group with severe hypoxia.