RESULTS

Results of the present study are demonstrated in the following tables and figures:

I. Descriptive Study

Table-1 Demographic characteristic of the studied patients (n=20)

	Range	26.0 - 36.0
	Mean ± SD	32.35 ± 2.8
	Range	0.6 - 2.3
	Mean ± SD	1.61 ± 0.43
	Male	13 (65.0 %)
	Female	7 (35.0 %)
	Normal	8 (40.0 %)
	Caesarean section	12 (60.0 %)

This table shows the demographic characteristics of the studied patients. They had mean gestational age of 32.35 ± 2.8 weeks and mean weight of 1.61 ± 0.43 Kg. The majority are males (65.0 %) and delivered by caesarean section (60%).

Table-2 Clinical and laboratory parameters in the studied patients (n=20).

	Range	62.0 - 87.0
	Mean ± SD	73.65 ± 7.84
	Range	110.0 - 160.0
	Mean ± SD	129.4 ± 15.57
	Range	3.3 - 5.25
	Mean ± SD	4.18 ± 0.58
	Range	8.5 - 40.6
	Mean ± SD	13.12 ± 6.88
	Range	130.0 - 433.0
	Mean ± SD	230.6 ± 81.54
	Range	5.1 - 16.4
	Mean ± SD	11.87 ± 3.0
	Range	0.8 - 2.1
	Mean ± SD	1.19 ± 0.35
	Range	3.2 - 12.0
	Mean ± SD	6.67 ± 2.73
	+ve	10 (50.0 %)
	-ve	10 (50.0 %)

This table shows the clinical and laboratory parameters of the studied patients withen 48hrs after delivery. They had mean respiratory rate of 73.65 ± 7.84 (breath/min.), mean heart rate of 129.4 ± 15.57 (beat/min.), mean RBC count of 4.18 ± 0.58 ($\times 10^6$), mean WBCs count of 13.12 ± 6.88 ($\times 10^3$), mean platelet count of 230.6 ± 81.54 (×

10^3), mean Hb of 11.87 ± 3.0 (gm/dL), mean serum creatinine of 1.19 ± 0.35 (mg/dL), mean serum bilirubin of 6.67 ± 2.73 (mg/dL) and +ve CRP in 10 patients (50.0 %)

II. Comparative Study

Table-3 Comparison of the demographic characteristics between the studied groups.

				Student t test	
				t	**p**
Gestational age (weeks)		32.35 ± 2.8	33.1 ± 2.73	0.69	0.49
Weight (Kg)		1.61 ± 0.43	1.68 ± 0.34	0.41	0.69
				Chi-square test	
				X2	**p**
	Male	13 (65.0 %)	7 (70.0 %)		
	Female	7 (35.0 %)	3 (30.0 %)		
	Normal	8 (40.0 %)	5 (50.0 %)		
	CS	12 (60.0 %)	5 (50.0 %)		

This table compares the demographic characteristics of the studied groups. Patients had lower gestational age and lower weight than controls but the difference is statistically insignificant. Also, patients shows higher frequency of delivery by CS but the difference is statistically insignificant.

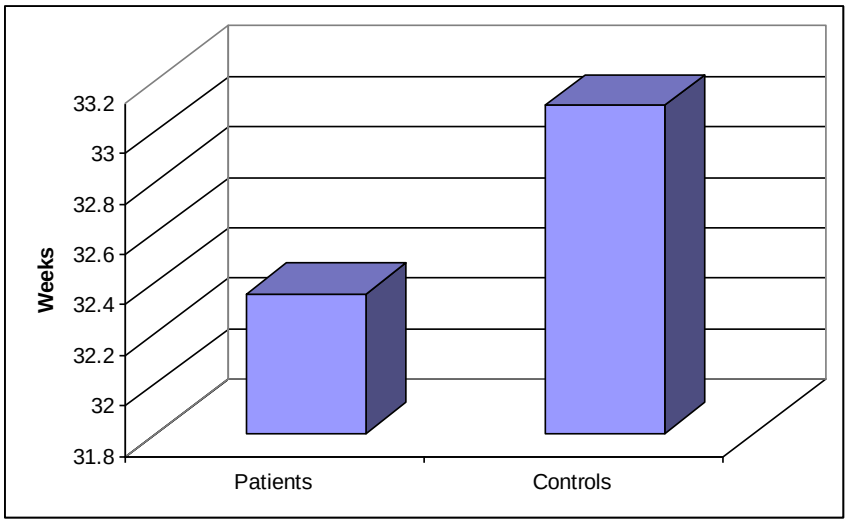

Figure 1. Comparison of gestational age between the studied groups

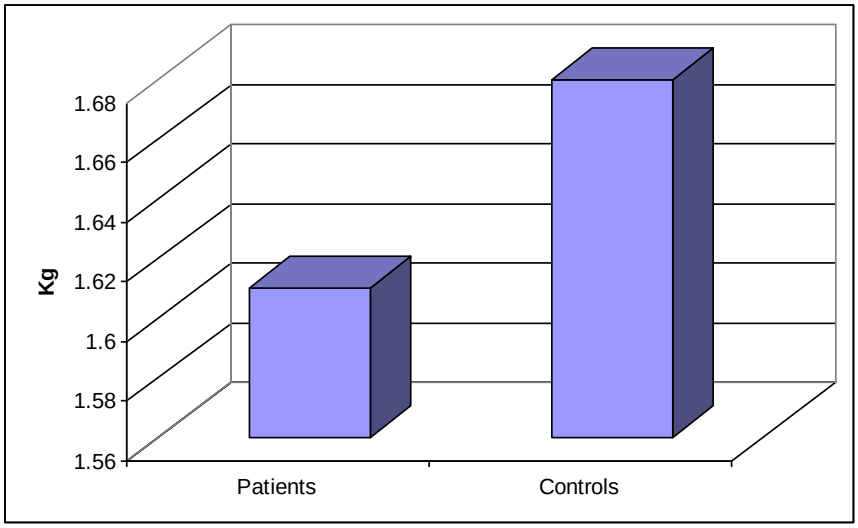

Figure 2. Comparison of weight between the studied groups

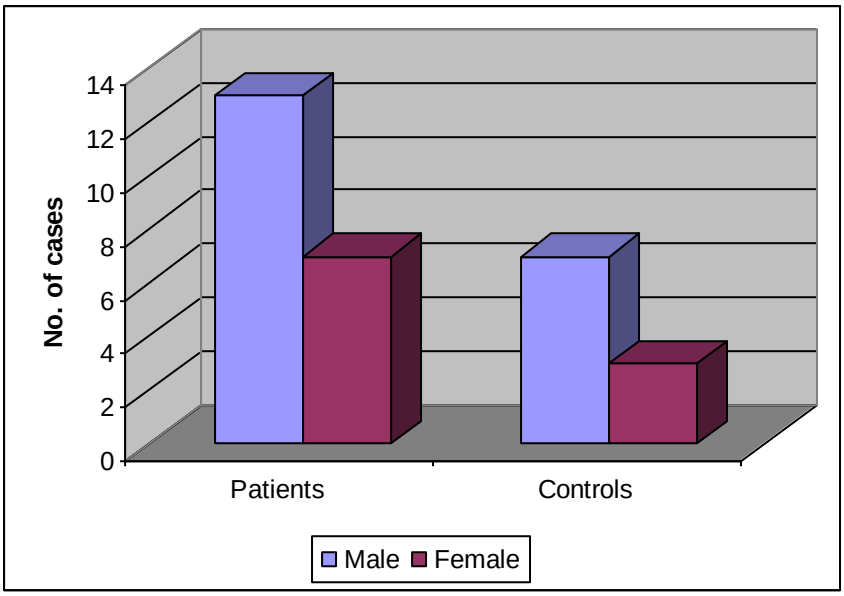

Figure 3. Comparison of sex distribution between the studied groups

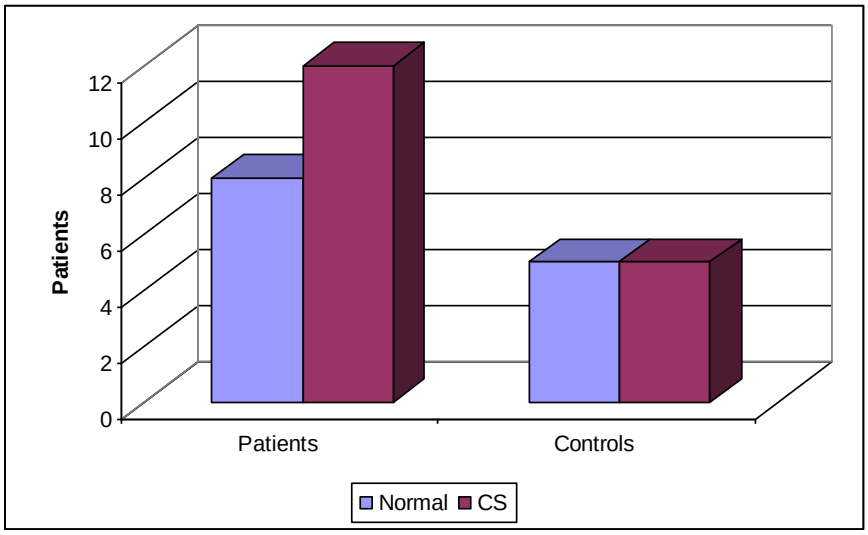

Figure 4. Comparison of mode of delivery between the studied groups

Table-4 Comparison of clinical parameters and O2 delivery

parameters in the studied groups.

				Student t test	
				t	p
Respiratory rate (breath/min.)		73.65 ± 7.84	49.8 ± 6.61	-8.25	0.0001
Heart rate (beat/min.)		129.4 ± 15.6	125.7 ± 12.8	-0.64	0.52
				Chisquare test	
				X2	**P**
	Free	-	10 (100.0 %)		
	CPAP	10 (50.0 %)	-		
	N. canula	9 (45.0 %)	-		
	Ventilator	1 (5.0 %)	-		

This table compares some clinical parameters and O2 delivery in the studied groups. Patients had significantly higher respiratory rate than controls. Also, patients were in need for supplemental respiratory aid (CPAP, nasal canula and ventilator) when compared with controls.

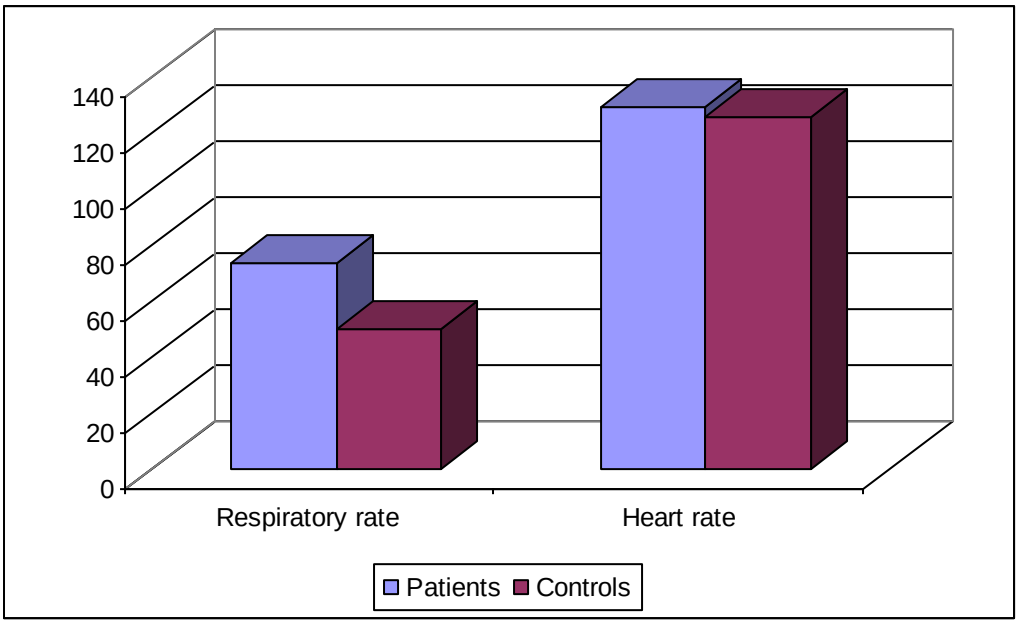

Figure 5. Comparison of respiratory rate and heart rate in the studied groups

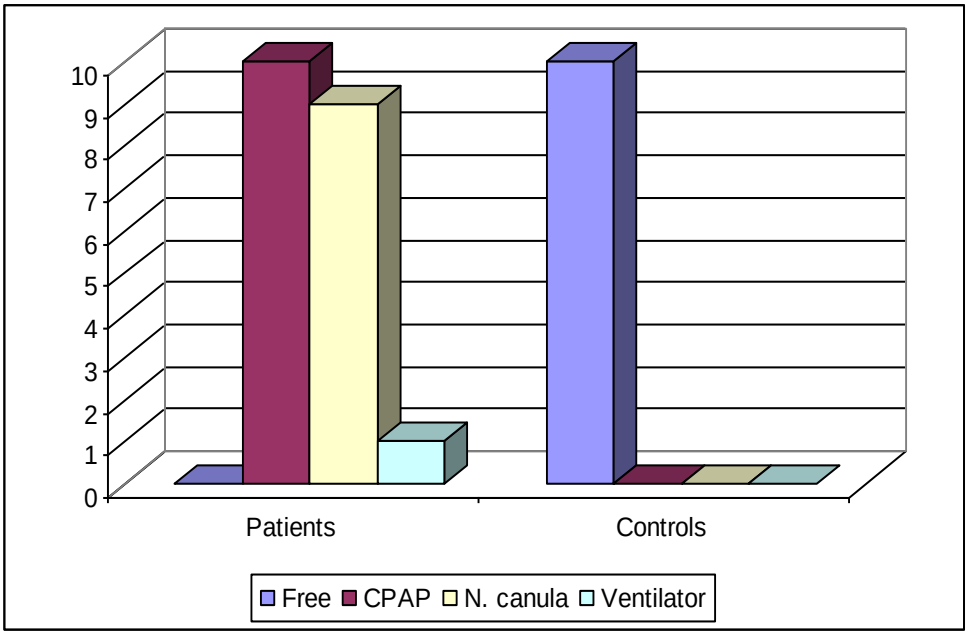

Figure 6. Comparison of oxygenation techniques in the studied groups

Table-5 Comparison of endothelin levels in the studied groups

				Student t test	
				t	**p**
ET-1 (cord) (pg/mL)		1.133 ± 0.138	1.086 ± 0.165	-0.83	0.41
ET-1 (blood) (pg/mL)		0.850 ± 0.131	0.737 ± 0.143	-2.14	**0.04**
	t	4.92	5.04		
	p	0.002	0.0001		

This table compares ET-1 levels in both study groups in the first (cord) sample and in the second (blood) sample. It shows no statistically significant difference in the cord sample where patients had statistically higher ET-1 level in the second sample (p=0.04). In addition, the table shows a statistically significant decline in ET-1 levels in patients and controls (p=002 and 0.0001 respectively).

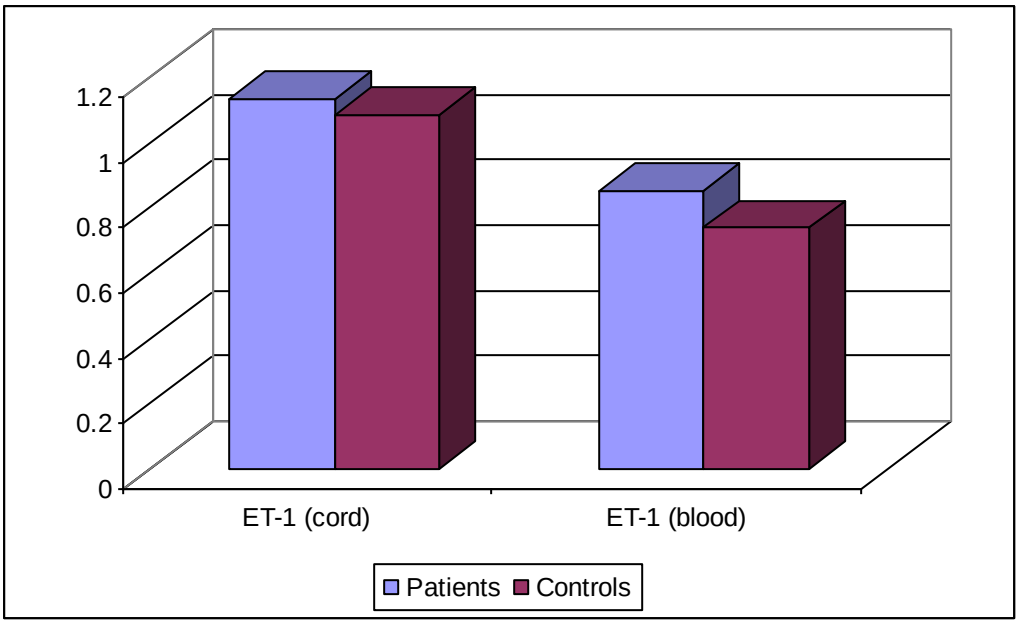

Figure 7. Comparison of cord and blood ET-1 levels in the studied groups

Table-6 Comparison of other laboratory parameters in the studied groups

				Student t test	
				t	p
RBC count ($\times 10^6$)		4.18 ± 0.58	4.84 ± 0.86	2.46	**0.02**
WBCs count ($\times 10^3$)		13.12 ± 6.88	13.88 ± 3.96	0.32	0.75
Platelet count ($\times 10^3$)		230.6 ± 81.54	194.4 ± 71.14	-1.19	0.24
Hb (gm/dL)		11.87 ± 3.0	14.81 ± 2.92	2.55	**0.016**
Serum creatinine (mg/dL)		1.19 ± 0.35	1.24 ± 0.42	0.38	0.71
Serum bilirubin (mg/dL)		6.67 ± 2.73	7.88 ± 3.95	0.98	0.33
				Chi-square test	
				X^2	p
	+ve	10 (50.0 %)	4 (40.0 %)		
	-ve	10 (50.0 %)	6 (60.0 %)		

This table compares the clinical and laboratory parameters in the studied groups. Patients had significantly higher respiratory rate than controls. Also, patients had significantly lower RBCs count and Hb concentration. Other variables were statistically insignificant.

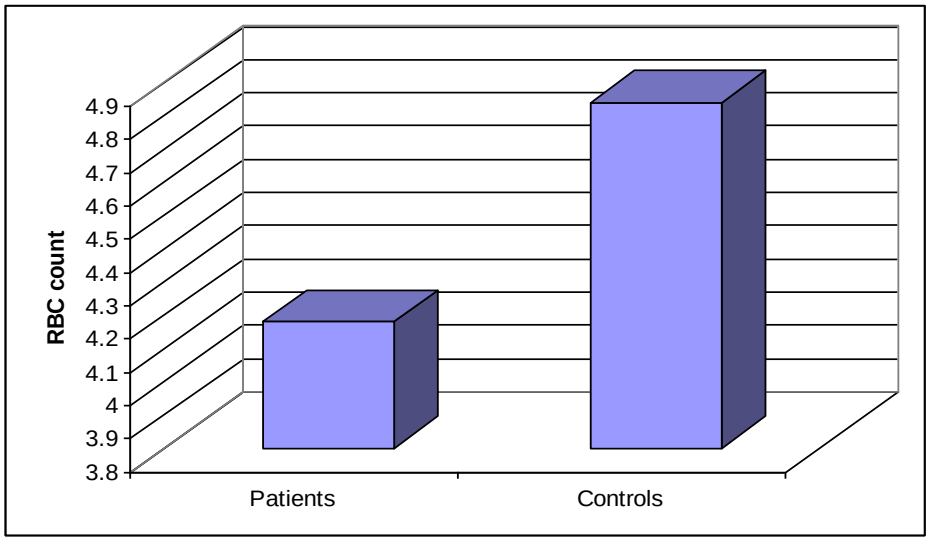

Figure 8. Comparison of RBCs count between the studied groups

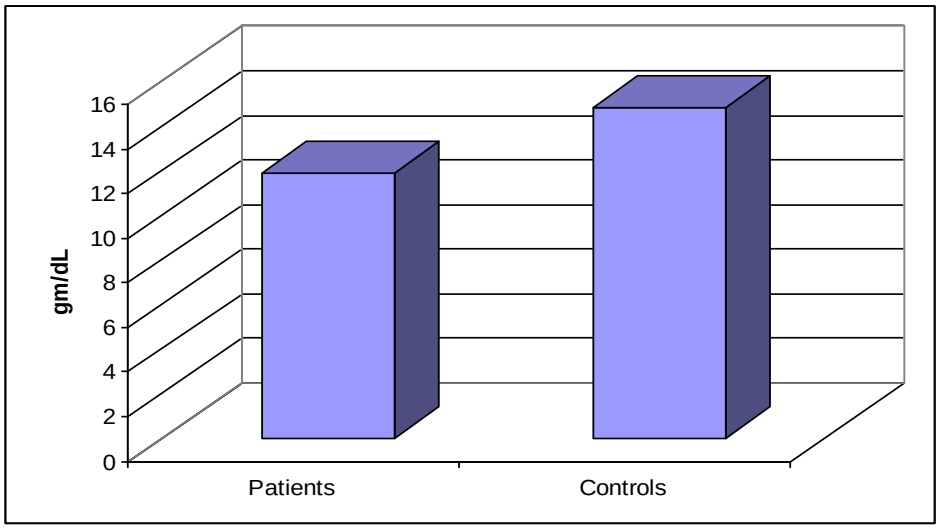

Figure 9. Comparison of Hb concentration between the studied groups

Table-7 Comparison of endothelin levels according to demographic

parameters

		Cord ET-1	Blood ET-1
	≤ 34 weeks	1.148 ± 0.160	0.815 ± 0.082
	> 34 weeks	1.098 ± 0.061	0 .930 ± 0.191
	t	0.73	-1.40
	p	0.47	0.21
	Male	1.107 ± 0.150	0.818 ± 0.074
	Female	1.147 ± .135	0.866 ± 0.153
	t	-0.61	-0.77
	p	0.54	0.44
	Normal	1.192 ± .176	0.858 ± 0.134
	CS	1.094 ± 0.096	0.844 ± .134
	t	1.62	0.23
	p	0.12	0.81

This table shows no significant difference among the study patients when compared regarding some demographic criteria.

Table-8 Comparison of endothelin levels according to clinical parameters and laboratory parameters

		Cord ET-1	Blood ET-1
	≤ 80	1.131 ± 0.133	0.854 ± 0.145
	> 80	1.142 ± 0.178	0.832 ± 0.051
	t	-0.14	0.29
	p	0.88	0.77
	≤ 12	1.168 ± 0.239	0.858 ± 0.067
	> 12	1.118 ± 0.072	0.846 ± 0.152
	t	0.50	0.18
	p	0.63	0.85
	≤ 150	1.107 ± 0.197	0.797 ± 0.074
	> 150	1.140 ± 0.127	0.863 ± 0.140
	t	-0.41	-0.89
	p	0.68	0.38
	≤ 1	1.093 ± 0.156	0.876 ± 0.135
	> 1	1.150 ± 0.132	0.838 ± 0.132
	t	-0.84	0.58
	p	0.41	0.56
	+ve	1.151 ± 0.183	0.843 ± 0.125
	-ve	1.116 ± 0.077	0.857 ± 0.143
	t	0.55	-0.23
	p	0.58	0.81
	CPAP	1.106 ± 0.141	0.849 ± 0.127
	N. canula	1.170 ± 0.142	0.862 ± 0.145
	t	-0.98	-0.21
	p	0.34	0.83

This table shows no significant difference among the study patients when compared regarding some clinical parameters and laboratory parameters.

III. Correlative Study

Table-9 Correlation of endothelin levels to demographic characteristics

	ET-1 Cord		ET-1 Blood	
	r	**p**	**r**	**p**
Gestational age	0.06	0.79	0.12	0.59
Weight	0.14	0.55	-0.12	0.59

This table shows no significant relation between gestational age an weight of the studied cases and both cord ET-1 and blood ET-1.

Table-10 Correlation of endothelin level to clinical and laboratory parameters

	ET-1 Cord		ET-1 Blood	
	r	**p**	**r**	**p**
RBC count	.31	0.17	-0.41	**0.005**
WBCs count	-0.46	**0.04**	-0.32	0.16
Platelet count	-0.17	0.46	-0.03	0.87
Hb	-.04	0.80	-0.38	**0.023**
Serum creatinine	0.13	0.57	-0.35	0.13
Serum bilirubin	-0.16	0.49	0.23	0.33

This table shows inverse correlation between ET-1 and WBCs count in cord blood and inverse correlarion between ET-1 and RBCs count and Hb concentration in blood samples after 48hrs post-natally.

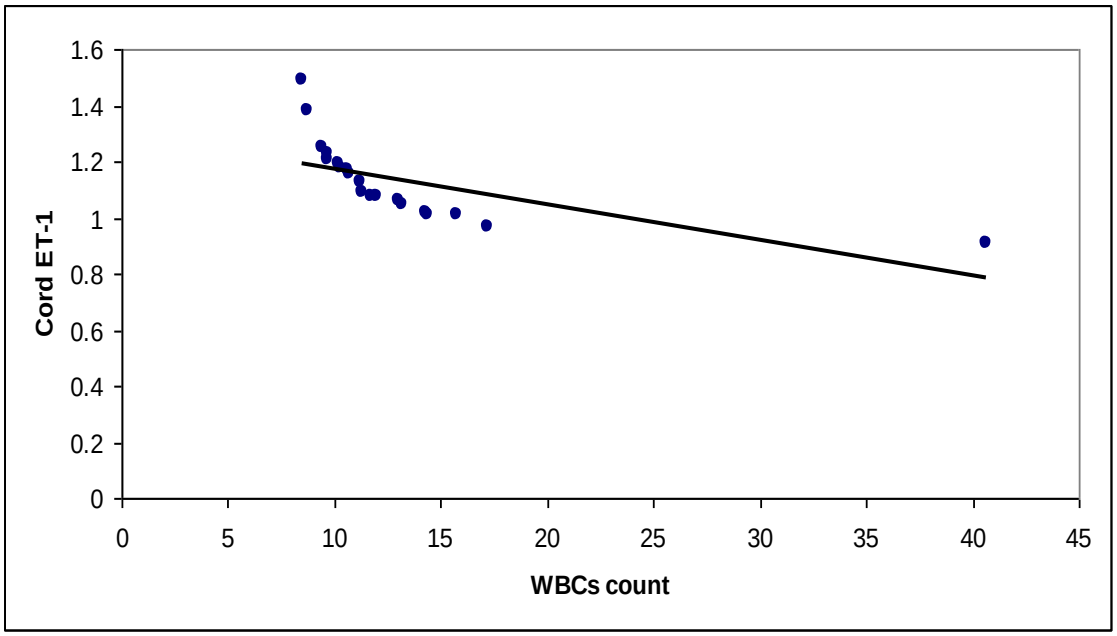

Figure 10. Inverse relation between cord blood ET-1 and WBCs count

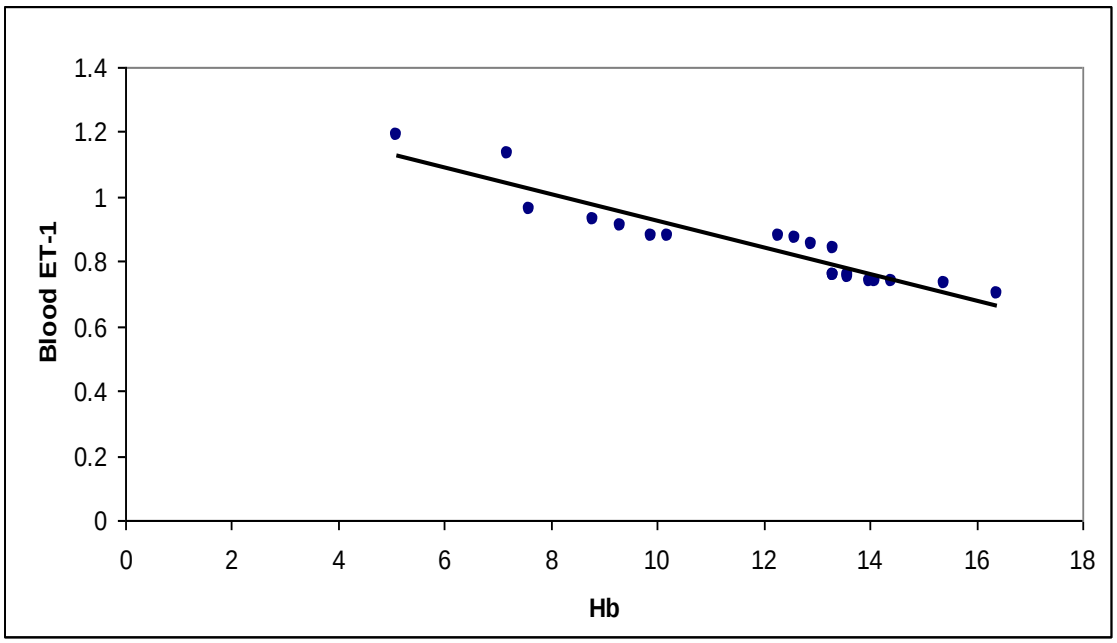

Figure 11. Inverse relation between ET-1 and Hb concentration in blood samples obtained after 48hrs post-natally.

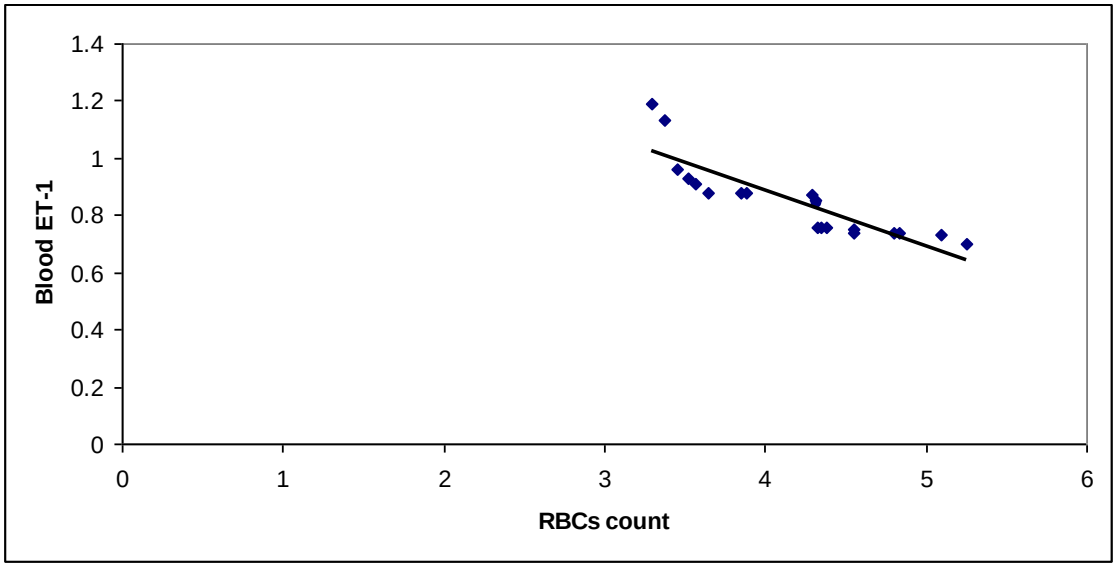

Figure 12. Inverse relation between blood sample after 48 hrs. ET-1 and RBCs count.