

## Results

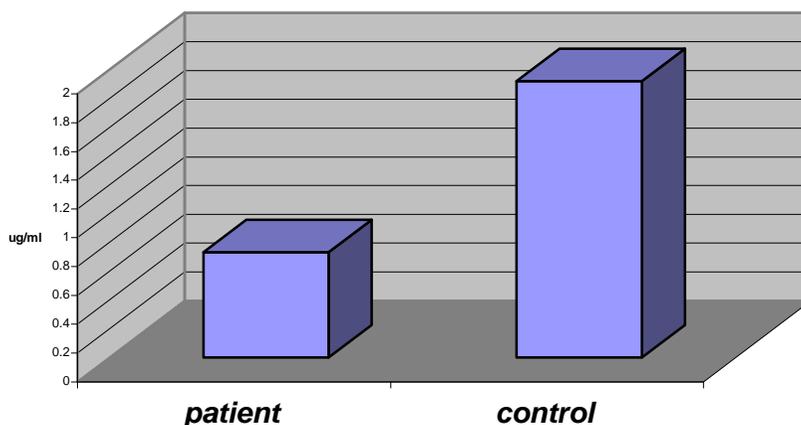
**Table (6):** Comparison between **patient** and **control** groups as regards gestational age, body weight, Apgar 1, 5 and MBL level:

	<b>Patient group</b> <b>n = 30</b> (Mean ± SD)	<b>Control group</b> <b>n = 20</b> (Mean ± SD)	<b>Statistical test</b> (t/z)	<b>p</b> (Significance)
<b>Gestational age (Wks)</b>	34.6 ± 3.2	37.1 ± 2.7	t = - 2.98	<0.01 (S)
<b>Birth weight (Kg)</b>	2.1 ± 0.6	2.9 ± 0.4	t = - 5.66	<0.001 (HS)
<b>Apgar 1</b>	4.2 ± 1.9	5.4 ± 1.2	Z = - 2.74	<0.01 (HS)
<b>Apgar 5</b>	6.8 ± 1.6	8.8 ± 0.9	Z = - 5.64	< 0.001 (HS)
<b>MBL (µg/ml)</b>	0.073 ± 0.4	1.92 ± 1.7	Z = - 3.07	<0.01 (S)

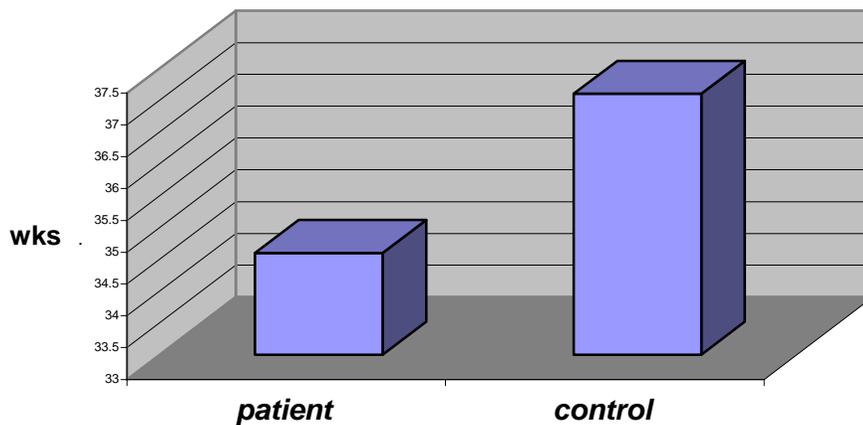
t = Student-t test, Z = Mann-Whitney Test

This table shows that gestational age and serum MBL levels were significantly lower in patient than control group. Birth weight and Apgar score at 1 and 5 minutes were highly significantly lower in patient than control group.

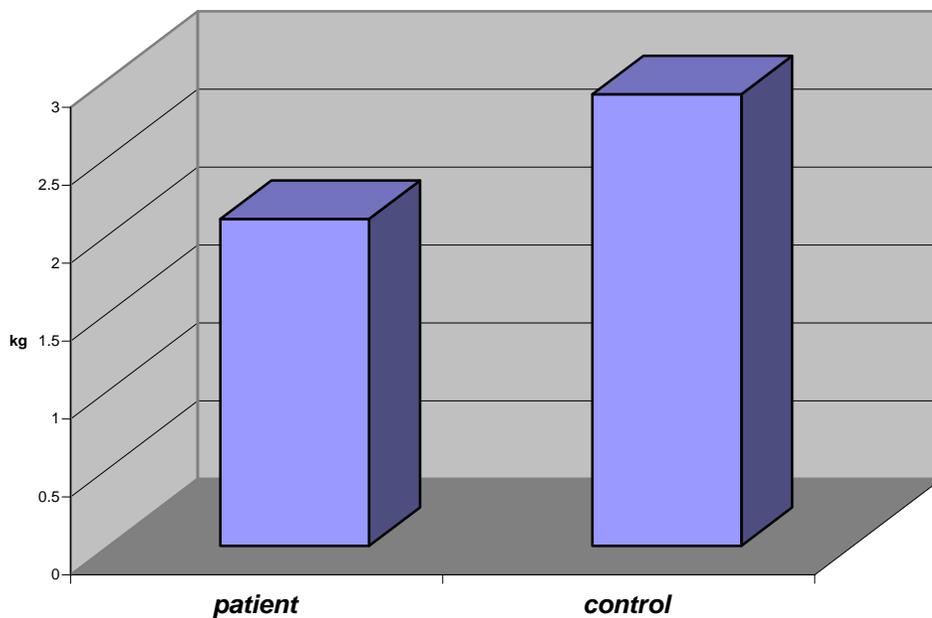
**Figure ( 8 ) MBL level among patient and control groups**



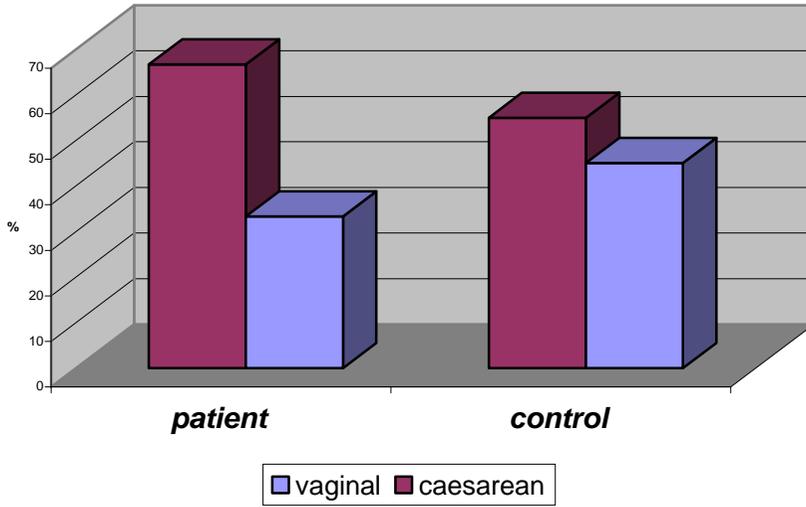
**Figure (9) gestational ages among the study groups**



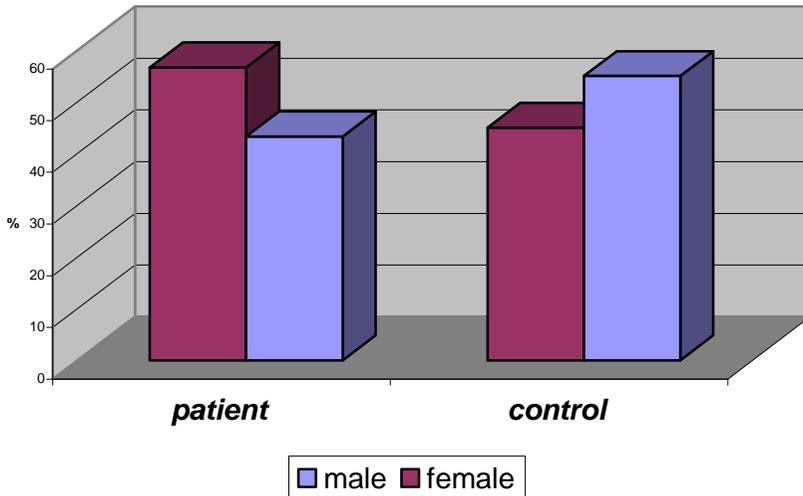
**Figure (10) birth weight among the study groups**

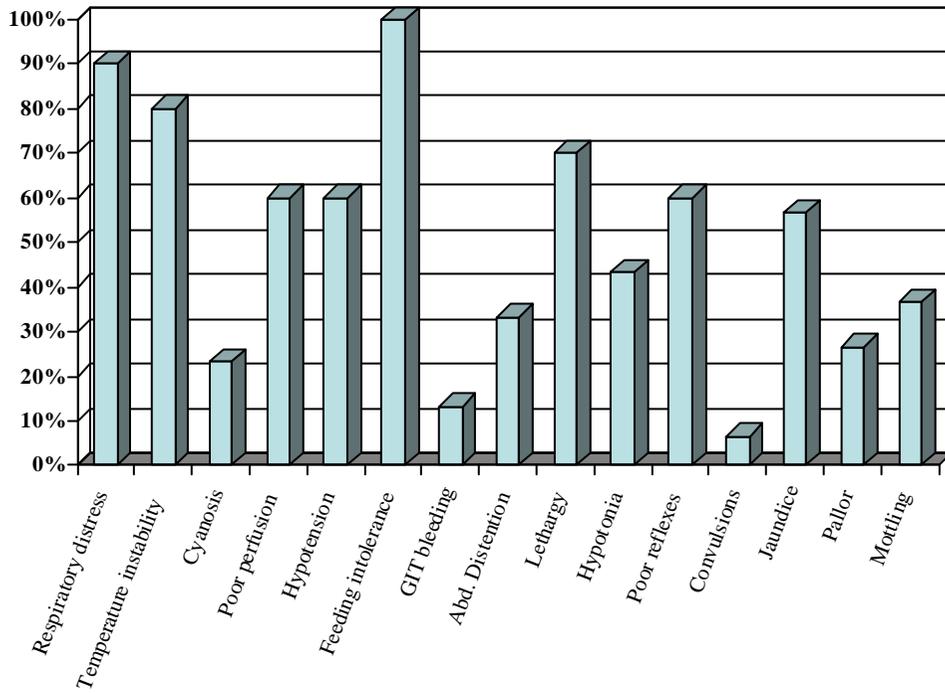


**Figure (11) mode of delivery among the study groups**



**Figure (12) sex distribution among the study groups**





**Figure ( 13 ) :** Clinical presentation in patient group.

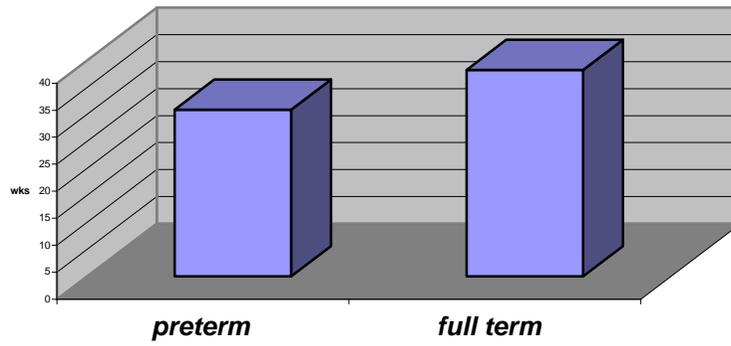
**Table (7):** Comparison between **preterm** and **full term patients** as regards quantitative data:

	<b>PT Patients n = 15 (Mean ± SD)</b>	<b>FT Patients n = 15 (Mean ± SD)</b>	<b>Statistical test (t/z)</b>	<b>p (Significance)</b>
<b>Gestational age (Wks)</b>	30.9 ± 2.1	38.3 ± 1.1	t = - 12.1	< 0.001 (HS)
<b>Birth weight (Kg)</b>	1.03 ± 0.4	2.9 ± 0.6	t = - 8.59	< 0.001 (HS)
<b>Apgar 1</b>	4.1 ± 1.9	4.3 ± 1.8	Z = - 0.3	>0.05 (NS)
<b>Apgar 5</b>	6.7 ± 1.6	6.9 ± 1.9	Z = - 0.31	>0.5 (NS)
<b>Age of onset (Days)</b>	4. 2 ± 2.3	4.5 ± 3.1	Z = - 0.3	>0.05(NS)
<b>CRP (mg/L)</b>	71.1 ± 26.7	76.1 ± 24.6	Z = - 0.53	>0.05 (NS)
<b>MBL (µg/ml)</b>	0.72 ± 0.5	0.74 ± 0.4	Z = - 0.12	>0.5 (NS)

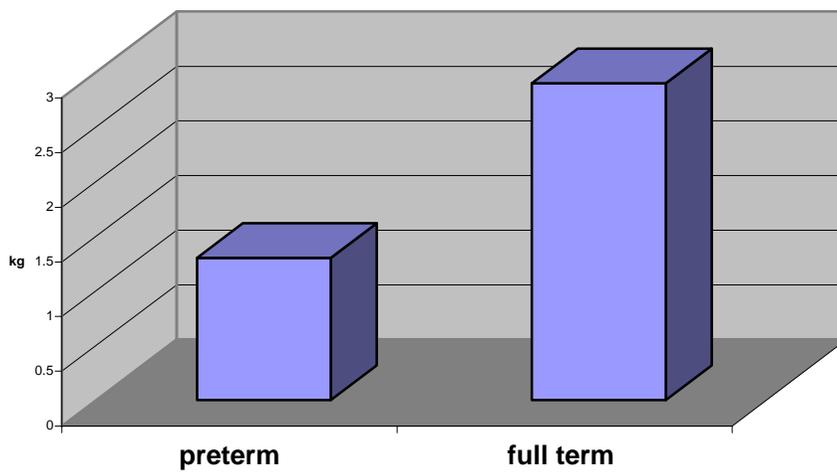
t = Student-t test, z = Mann-Whitney Test

This table shows that preterm patients had highly significantly lower gestational age and birth weight than full-term patients. Apgar score at 1, 5 and 10 minutes, age of onset of infection, CRP and MBL level showed non significant difference between the two groups.

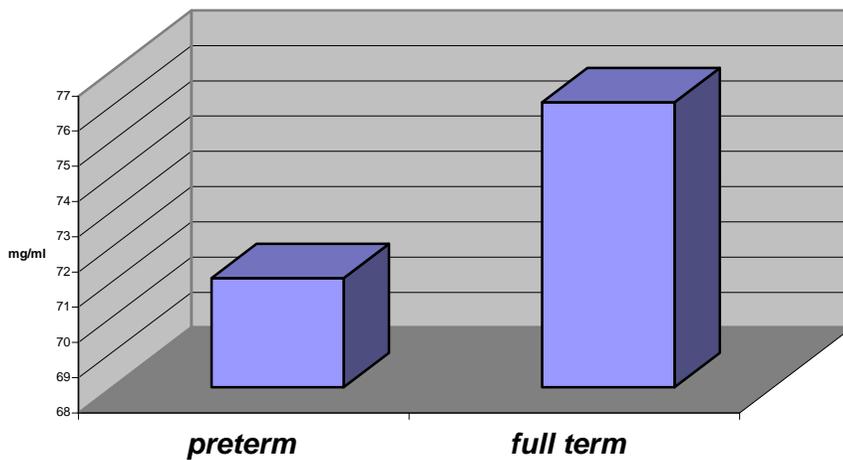
**Figure (14) gestational ages among preterm and full term patients**



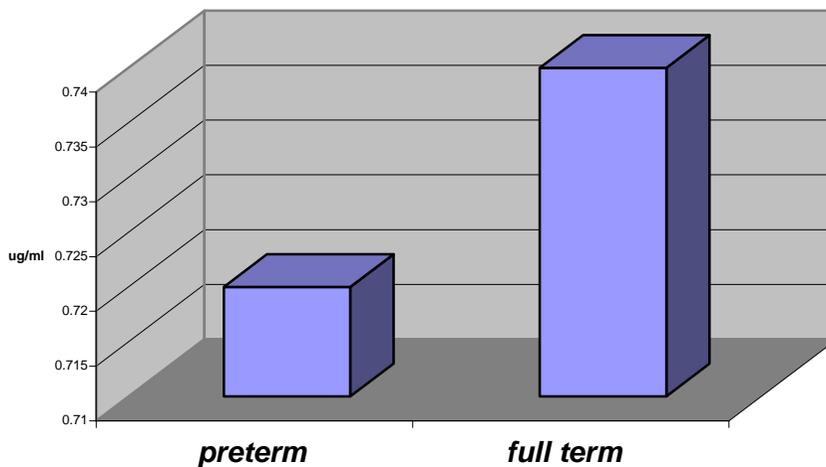
**Figure (15) birth weight among preterm and full term patients**



**Figure (16) CRP among preterm and full term patients**



**Figure (17) MBL level among preterm and full term patients**



## Results

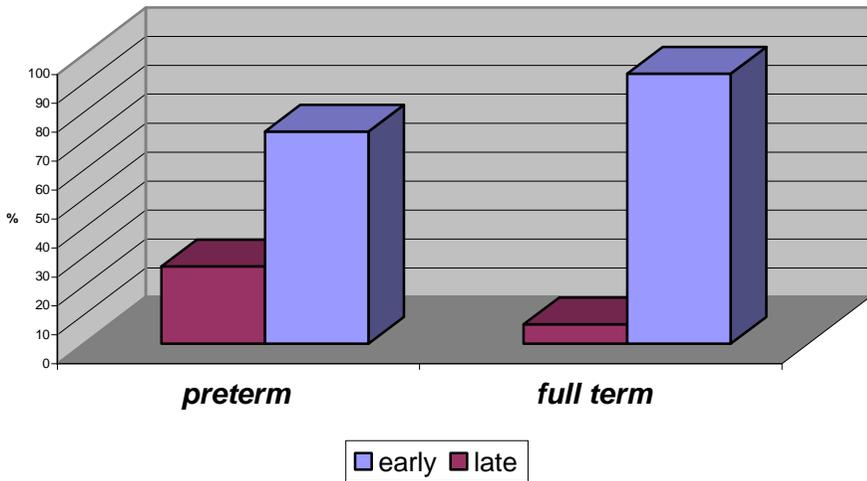
**Table (8): Comparison between preterm and full term patients as regards qualitative data:**

	<b>PT Patients</b> n = 15 n (%)	<b>FT Patients</b> n = 15 n (%)	<b>Statistical test</b> ( $\chi^2$ )	<b>p</b> (Significance)
<b>Mode of delivery</b> Vaginal Caesarian	7 (46.7%) 8 (53.3%)	3 (20%) 12 (80%)	$X^2 = 1.35$	>0.05 (NS)
<b>Sex</b> Male Female	9 (60.3%) 6 (40.7%)	4 (35.3%) 11 (64.7%)	$X^2 = 2.17$	>0.05 (NS)
<b>Onset of sepsis</b> Early Late	11 (73.3%) 4 (26.7%)	14 (93.3%) 1 (6.7%)	$X^2 = 0.96$	>0.05 (NS)
<b>Blood culture</b> +ve -ve	11 (73.3%) 4 (26.7%)	3 (20%) 12 (80%)	$X^2 = 6.56$	<0.01 (S)
<b>Outcome</b> Recovery Death	7 (46.7%) 8 (53.3%)	14 (93.3%) 1 (6.7%)	$X^2 = 5.71$	<0.01 (HS)

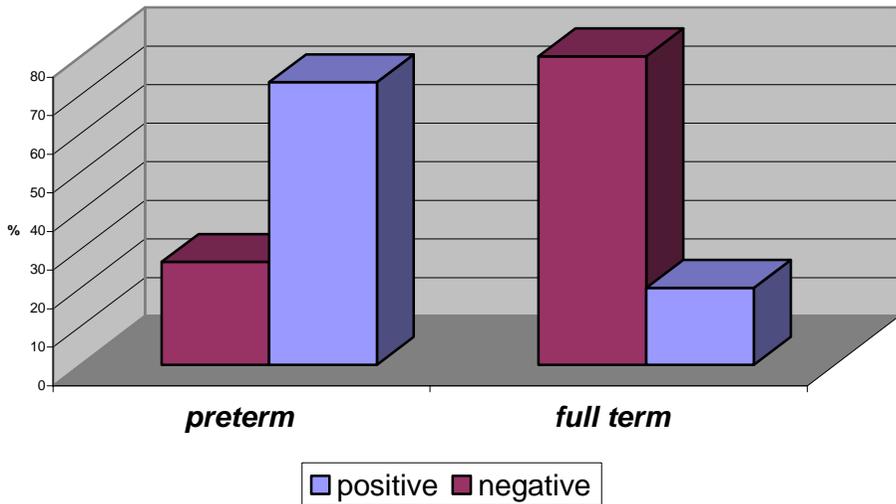
$\chi^2 =$  Chi-Square Test.

This table shows that positive blood cultures and mortality were significantly increased in PT patients than FT patients. Mode of delivery, sex and onset of sepsis had no significant difference between the two groups.

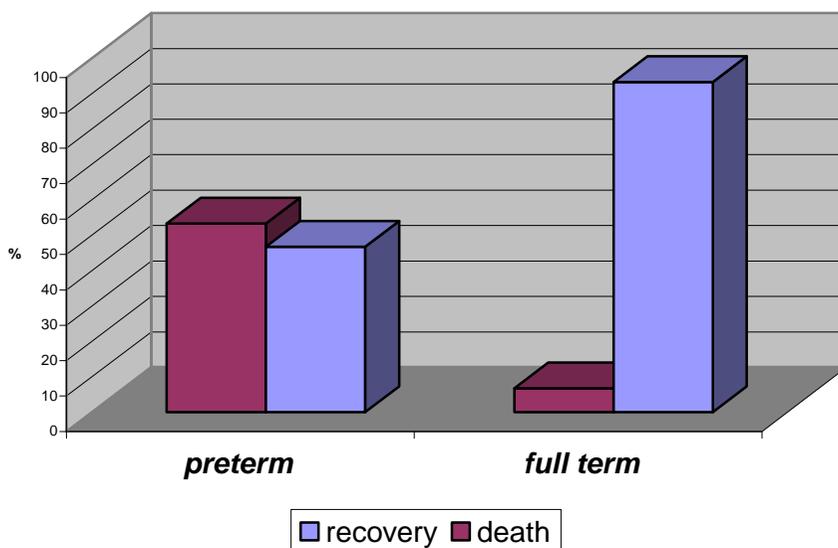
**Figure ( 18 )onset of sepsis among preterm and full term patients**



**Figure (19)blood culture among preterm and full term patients**



**Figure (20) outcome among preterm and full term patients**



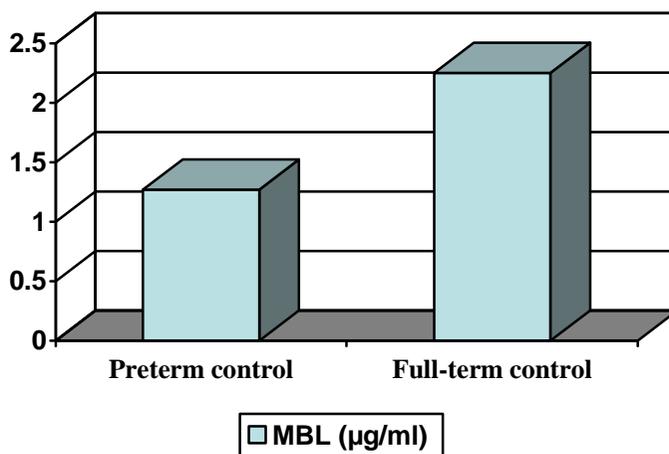
**Table (9): Comparison between preterm and full-term control as regards gestational age, body weight, Apgar 1, 5 and serum MBL level:**

	<b>PT Control n = 10 (Mean ± SD)</b>	<b>FT Control n = 10 (Mean ± SD)</b>	<b>Statistical test (t/z)</b>	<b>p (Significance)</b>
<b>Gestational age (Wks)</b>	35.3 ± 0.8	38.9 ± 0.2	$t = -13.81$	< 0.001 (HS)
<b>Birth weight (Kg)</b>	2.3 ± 0.3	3.5 ± 0.6	$t = -5.66$	< 0.001 (HS)
<b>Apgar 1</b>	5.2 ± 0.8	5.6 ± 0.4	$Z = -1.41$	>0.05 (NS)
<b>Apgar 5</b>	8.7 ± 0.1	8.8 ± 0.1	$Z = .88$	>0.05 (NS)
<b>MBL (µg/ml)</b>	1.4 ± 1.1	2.44 ± 2.1	$Z = -1.39$	>0.05 (NS)

*t = Student-t test, z = Mann-Whitney Test*

## Results

This table shows that preterm control had highly significantly lower gestational age and birth weight than full-term control. Other parameters show non significant difference between both groups.



**Figure (21):** MBL level in preterm and full-term control.

**Table (10):** Comparison between **preterm patients** and **preterm control** as regards gestational age, body weight, Apgar 1, 5 and serum MBL level:

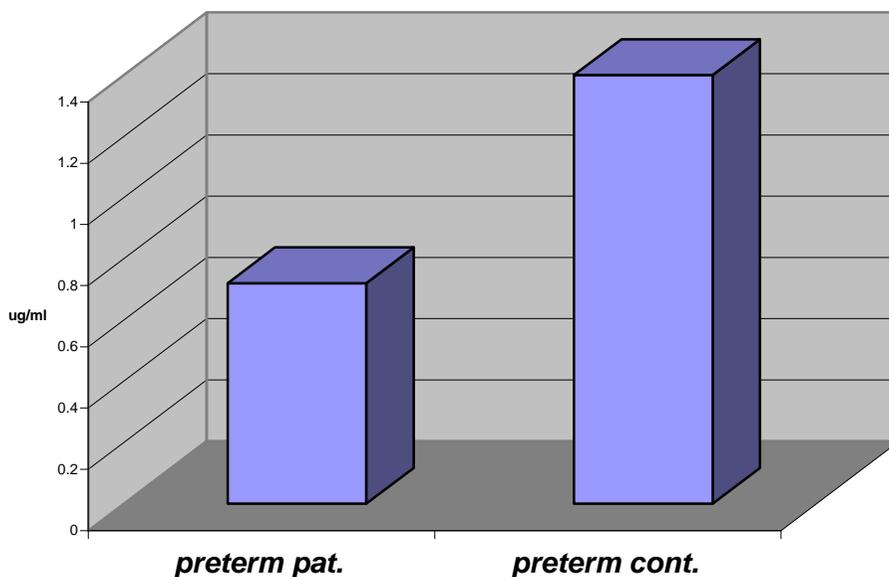
	<b>PT Patients</b> <b>n = 15</b> (Mean ± SD)	<b>PT Control</b> <b>n = 10</b> (Mean ± SD)	<b>Statistical test</b> (t/z)	<b>p</b> (Significance)
<b>Gestational age (Wks)</b>	30.09 ± 2.1	36.1 ± 0.8	$t = -8.69$	< 0.001 (HS)
<b>Birth weight (Kg)</b>	1.3 ± 0.4	2.3 ± 0.3	$t = -7.13$	< 0.001 (HS)
<b>Apgar 1</b>	4.1 ± 1.9	5.2 ± 0.8	$Z = -1.99$	>0.05 (NS)
<b>Apgar 5</b>	6.7 ± 1.6	8.7 ± 0.1	$Z = -4.83$	<0.001 (NS)
<b>MBL (µg/ml)</b>	0.72 ± 0.5	1.4 ± 1.1	$Z = -1.83$	>0.05(NS)

$t = Student-t$  test,  $z = Mann-Whitney$  Test

## Results

This table shows that preterm patients had highly significantly lower gestational age and birth weight than preterm control. Other parameters showed non significant difference between the two groups.

Figure (22) MBL level among preterm pat. and preterm control group



**Table (11):** Comparison between **full term patients** and **full term control** as regards gestational age, body weight, Apgar 1, 5 and serum MBL level:

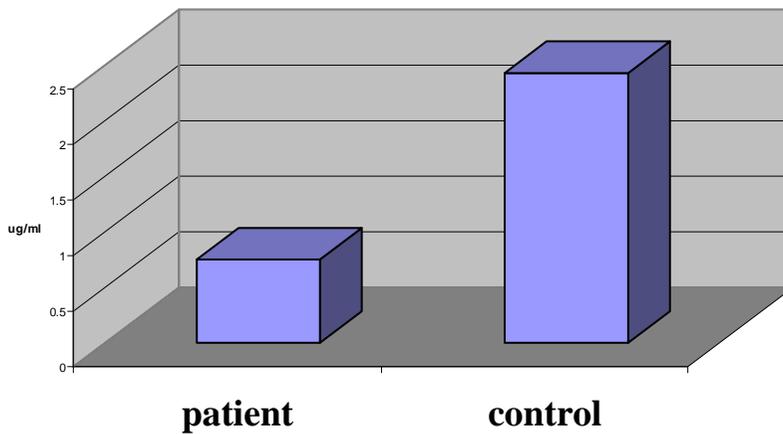
	<b>FT Patients n = 15 (Mean ± SD)</b>	<b>FT Control n = 10 (Mean ± SD)</b>	<b>Statistical test (t/z)</b>	<b>p (Significance)</b>
<b>Gestational age (Wks)</b>	38.3 ± 1.1	38.9 ± 0.2	t = - 2.06	<0.05 (S)
<b>Birth weight (Kg)</b>	2.9 ± 0.6	3.5 ± 0.6	t = - 2.45	<0.05 (S)
<b>Apgar 1</b>	4.3 ± 1.8	5.6 ± 0.4	Z = - 2.7	<0.01 (HS)
<b>Apgar 5</b>	6.9 ± 1.9	8.8 ± 0.1	Z = - 3.86	<0.001 (HS)
<b>MBL (µg/ml)</b>	0.74 ± 0.4	2.44 ± 2.2	Z = - 2.42	<0.05 (S)

## Results

$t = \text{Student-}t \text{ test, } z = \text{Mann-Whitney Test}$

This table shows that full-term patients had significantly lower gestational age and birth weight and highly significantly lower Apgar score at 1 and 5 minutes and serum MBL plasma than full-term control.

**Figure (23) MBL level among fullterm pat. and fullterm control groups**



**Table (12):** Correlation between **MBL** and rest of parameters in patient group:

<b>MBL (µg/ml)</b>	<b>Other parameter</b>	<b><i>r</i></b>	<b><i>p</i> (Significance)</b>
	<b>Gestational age (Wks)</b>	- 0.045	>0.05 (NS)
	<b>Birth weight (Kg)</b>	- 0.198	>0.05 (NS)
	<b>Apgar 1</b>	- 0.088	>0.05 (NS)
	<b>Apgar 5</b>	- 0.081	>0.05 (NS)
	<b>Apgar 10</b>	- 0.286	>0.05 (NS)
	<b>Age of onset (Days)</b>	0.113	>0.05 (NS)
	<b>NICU Stay (Days)</b>	0.191	>0.05 (NS)
	<b>TLC (×10<sup>9</sup>/L)</b>	- 0.261	>0.05 (NS)
	<b>ANC (×10<sup>9</sup>/L)</b>	- 0.191	>0.05 (NS)
	<b>Immature PMN (×10<sup>9</sup>/L)</b>	- 0.182	>0.05 (NS)
	<b>Mature PMN (×10<sup>9</sup>/L)</b>	- 0.181	>0.05 (NS)
	<b>I/T Ratio</b>	- 0.161	>0.05 (NS)
	<b>I/M Ratio</b>	- 0.181	>0.05 (NS)
	<b>Platelets (×10<sup>9</sup>/L)</b>	- 0.821	>0.05 (NS)
	<b>RBCs (×10<sup>12</sup>/L)</b>	- 0.193	>0.05 (NS)
	<b>Hb (gm/dl)</b>	- 0.121	>0.05 (NS)
	<b>Hct (%)</b>	- 0.113	>0.05 (NS)
	<b>CRP (mg/L)</b>	- 0.283	>0.05 (NS)

*r* = Spearman correlation coefficient test.

TLC, total leucocytic count; ANC, absolute neutrophil count; PMN, polymorphnuclear leucocytes, I/T ratio, Immature to Total Neutrophil Ratio; I/M ratio, Immature to Mature Neutrophil Ratio; HSS, hematologic scoring system; Hb, hemoglobin; Hct, hematocrite; CRP, C-Reactive Protein; MBL, mannose binding lectin.

## Results

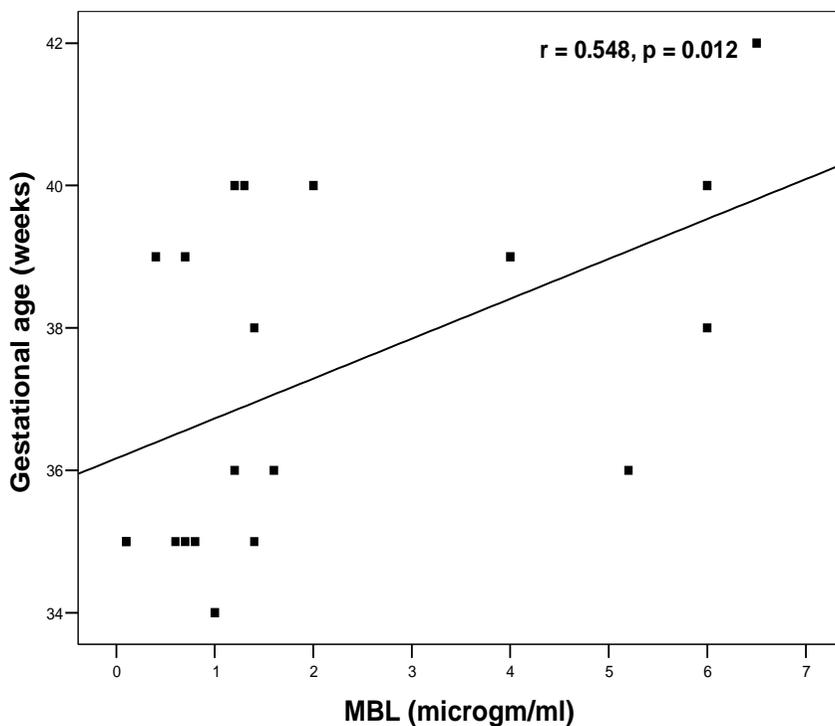
This table shows that there was no significant correlation between MBL level and the other parameters in the patient group.

**Table (13):** Correlation between **MBL** and **gestational age** and **birth weight** in the **control** group:

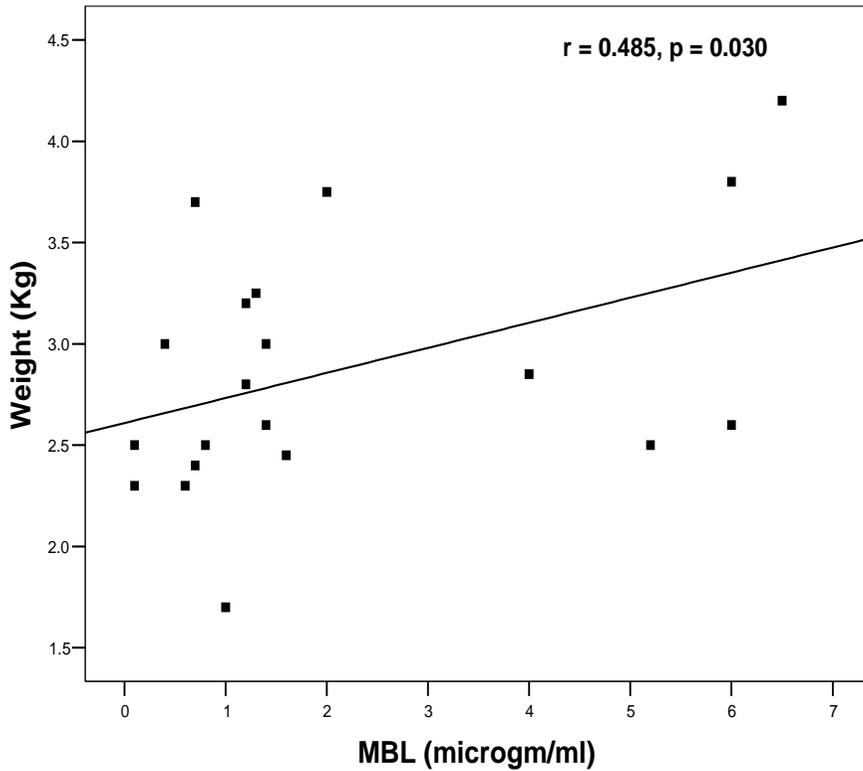
MBL ( $\mu\text{g/ml}$ )	Other parameter	$r$	$p$ (Significance)
	Gestational age (Wks)	0.613	<0.01 (S)
	Birth weight (Kg)	0.416	<0.05 (S)

$r$  = Spearman correlation coefficient test

This table shows significant positive correlation between MBL level and gestational age and birth weight in the control group.



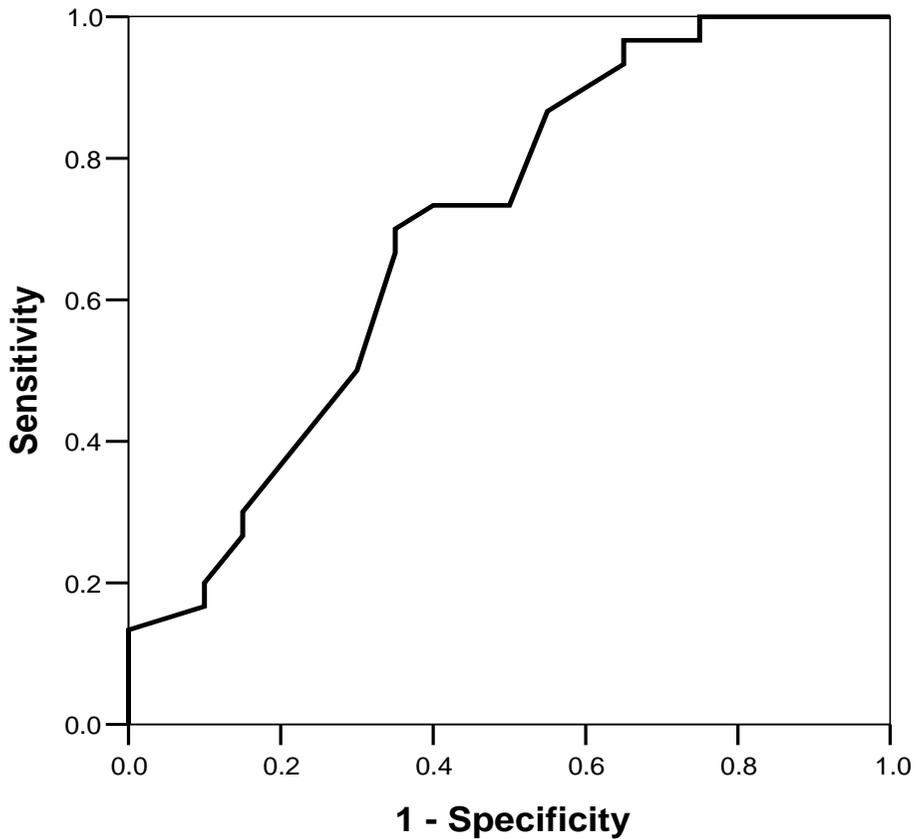
**Figure (24):** Correlation between **MBL** and **gestational age** in the **control** group.



**Figure (25):** Correlation between **MBL** and **birth weight** in the **control** group.

**Table (14): Sensitivity and Specificity of MBL serum level using ROC curve:**

Area under the curve	Cutoff	Sensitivity	Specificity
0.712	0.965	71%	64%



**Figure (26): ROC curve.**