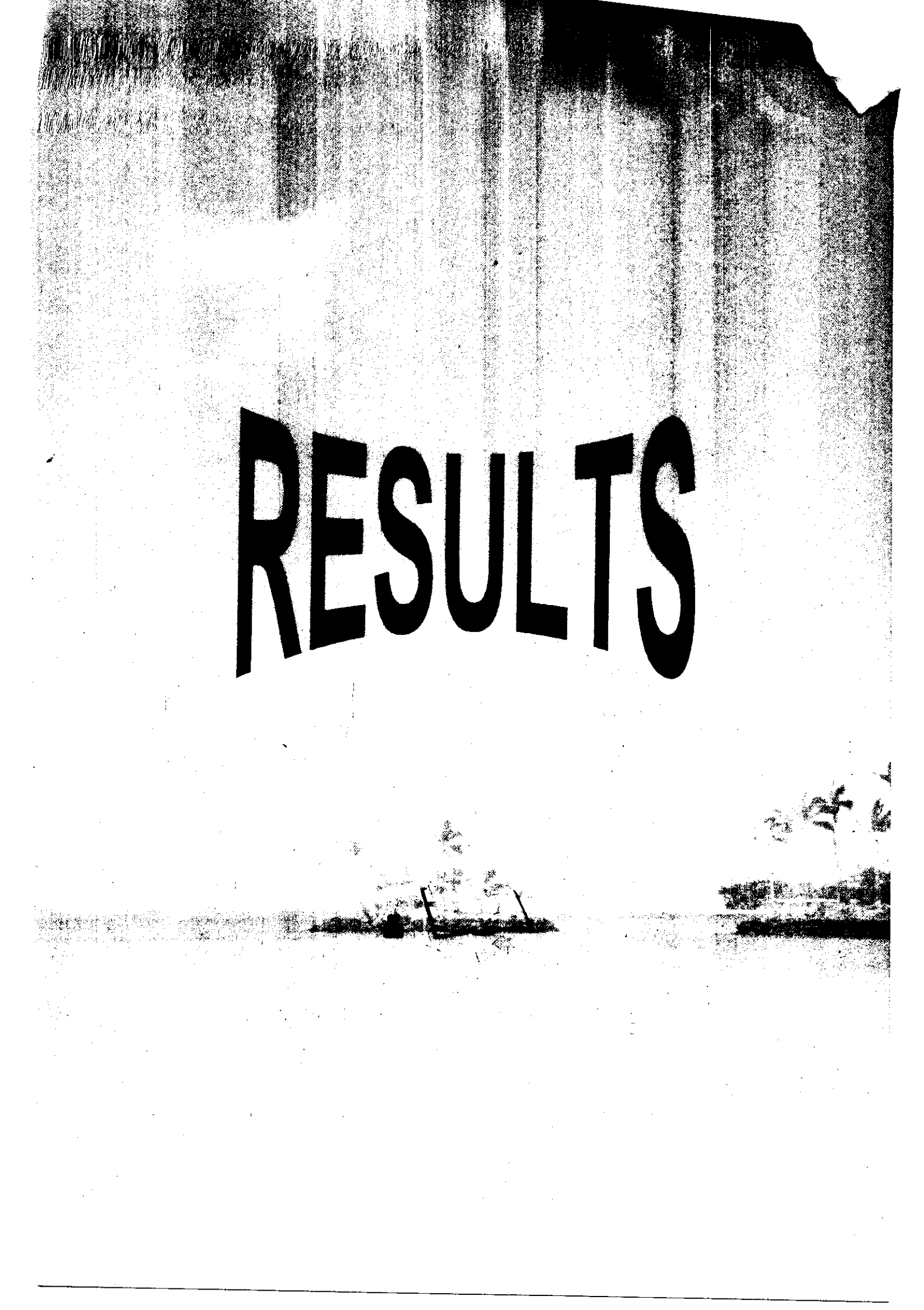
RESULTS



RESULTS

Table (1): Showed that the study was done on 40 babies, 10 babies as healthy control full term and 30 high riske babies (10 preterm, 10 RD, and 10 IDM). 22 were male (55%) and 18 were female (45%). The statistical analysis showed no significant difference.

Table (2): Showed the range, mean ± S.D of gestational age (weeks) of in the studied groups. Statisticaly analysis showed significantly difference between full term and other high risk groups.

Table (3): Showed range, mean ± S.D of body weight (kgs) of the studied groups. Statisticaly analysis showed that the birth weight of control was significantly higher than that of preterm and the birth weight of RD group was significantly lower than the birth weight of IDM.

Table (4): Showed the mode of delivary in studied groups. 72.5% of all cases were delivered vaginally, and the rest 27.5% were delivered by C.S.

Table (5, 6): Showed range, mean ± S.D of the apgar scroe at 1 minute and 5 minutes in the studied groups. At 1 minute full term had significant difference from other groups. While at 5 minutes statistical analysis show significant difference between full term, preterm and R.D.

Table (1): Sex distribution in the studied groups.

Studied groups	*Male*		*female*	
	N	*%*	*N*	*%*
- Control	7	70	3	30
- Preterm	5	50	5	50
- RD	6	60	4	40
- IDM	4	40	6	60
- Total	22	55	18	45

Table (2): Gestational age (WKs) range and mean ± SD in studied groups.

	Number	*Range*	*Mean ± SD*
- Control	10	37-40	38.6 ± 1.26
- Preterm	10	32-36	34.2 ± 1.61
- RD	10	33-38	35.6 ± 1.77
- IDM	10	35-38	36.5 ± 0.849

Table (3): Birth wight (kg) mean ± SD in different groups .

	Range	*Mean ± SD*
- Control	2.6 - 3.9	3.27 ± 0.46
- Preterm	1.5 - 2.1	1.81 ± 0.21
- RD	1.35 - 3.6	2.31 ± 0.716
- IDM	3.6 - 4.9	4.3 ± 0.485

Table (4): Mode of delivery in studied groups.

Studied groups	*V.D.*		*C.S.*	
	N	*%*	*N*	*%*
- Control	10	100	0	0
- Preterm	9	90	1	10
- RD	7	70	3	30
- IDM	3	30	7	70
- Total	29	72.5	11	27.5

Table (5): Apgar score at 1 minute in the studied groups.

	Range	***Mean ± SD***
- Control	6-8	7.4 ± 0.6992
- Preterm	3-7	4.9 ± 1.1005
- RD	3-7	4.9 ± 1.3703
- IDM	3-6	5 ± 1.1547

Table (6): Apgar score at 5 minutes in the studied groups.

	Range	***Mean ± SD***
- Control	9	9.0 ± 0.00
- Preterm	6-9	7.9 ± 0.8756
- RD	6-9	7.7 ± 1.0593
- IDM	8-9	8.6 ± 0.5164

Table (7) and figure (1): Showed the mean ± S.D of total serum calcium and ionized calcium levels in the studied groups in the 1st day of life. There were significantly lower level of total serum calcium in preterm, R.D and IDM in comparison to the control group ($P < 0.05$). There were significantly difference in ionized calcium in R.D and IDM in comparison to the full term control group ($P < 0.05$), although no significant difference in preterm.

Table (8): Showed the mean ± S.D of total serum calcium and ionized calcium level in the studied groups in the 3rd day of life. That there were statistically significantly difference ($P < 0.05$) between control and high risk groups except preterm group, while there was significantly difference only between full term and IDM group ($P < 0.05$) for the ionized calcium.

Table (9) and figure (2): Showed the comparison of the mean ± S.D total serum calcium level in the studied groups in 1st and 3rd day of life. There were significant increment in the total serum calcium in all studied groups on the 3rd day of life in comparison to total serum calcium level in the 1st day of life.

Table (10) and figure (2): Showed the comparison of mean ± S.D of ionized serum calcium level in the 1st and 3rd day of life between the studied groups. The ionized serum calcium were increased in all studied groups by 3rd day of life. The increment was not statistically significant in control and preterm groups while it was statistically significantly in R.D and IDM groups ($P < 0.05$).

Table (7): Total serum calcium and ionized calcium in 1st day of life in healthy full term control and high risk groups.

Groups	Total Ca			Ionzied Ca		
	Mean ± SD	t	P	Mean ± SD	t	P
- Full term	8.44 ± 1.38			4.40 ± 6.16		
- Preterm	7.36 ± 1.41	4.68	< 0.05*	4.34 ± 0.42	0.42	0.67
- RD	7.27 ± 1.42	4.03	< 0.05*	3.9 ± 0.44	4.35	< 0.05*
- IDM	6.70 ± 1.08	5.50	< 0.003*	3.8 ± 0.49	3.23	0.0001*

* P is significant.

Table (8): Total serum calcium and ionized calcium in 3rd day of life in healthy full term and high risk groups.

Groups	Total Ca			Ionzied Ca		
	Mean ± SD	t	P	Mean ± SD	t	P
- Full term	9.70 ± 1.28			4.60 ± 0.16		
- Preterm	9.17 ± 1.51	4.85	> 0.5	4.51 ± 0.43	1.21	0.24
- RD	8.36 ± 1.76	1.94	0.01*	4.44 ± 0.85	0.90	0.5
- IDM	7.53 ± 1.03	2.14	0.001*	4.04 ± 0.44	4.35	0.05*

* P is significant

Table (9): Statistical evaluation of the change in total serum calcium observed in 1st and 3rd day of life in different studied groups (paired t).

Groups	*1st* *Mean ± SD*	*3rd* *Mean ± SD*	t_{paired}	*P*
- Control	8.44 ± 1.38	9.70 ± 1.28	- 6.92	< 0.001*
- Preterm	7.36 ± 1.41	9.17 ± 1.51	- 5.40	< 0.001*
- RD	7.27 ± 1.42	8.36 ± 1.76	- 5.86	< 0.001*
- IDM	6.70 ± 1.08	7.53 ± 1.039	- 7.19	< 0.001*

* P is significant

Table (10): Statistical evaluation of the change in ionized calcium observed in 1st and 3rd day of life in different studied groups (paired t).

Groups	*1st* *Mean ± SD*	*3rd* *Mean ± SD*	t_{paired}	*P*
- Control	4.40 ± 0.16	4.60 ± 0.610	1.95	> 0.15
- Preterm	4.34 ± 0.42	4.51 ± 0.430	2.08	> 0.067
- RD	3.90 ± 0.44	4.44 ± 0.850	4.02	< 0.003
- IDM	3.87 ± 0.49	4.04 ± 0.443	3.72	< 0.05*

* P is significant.

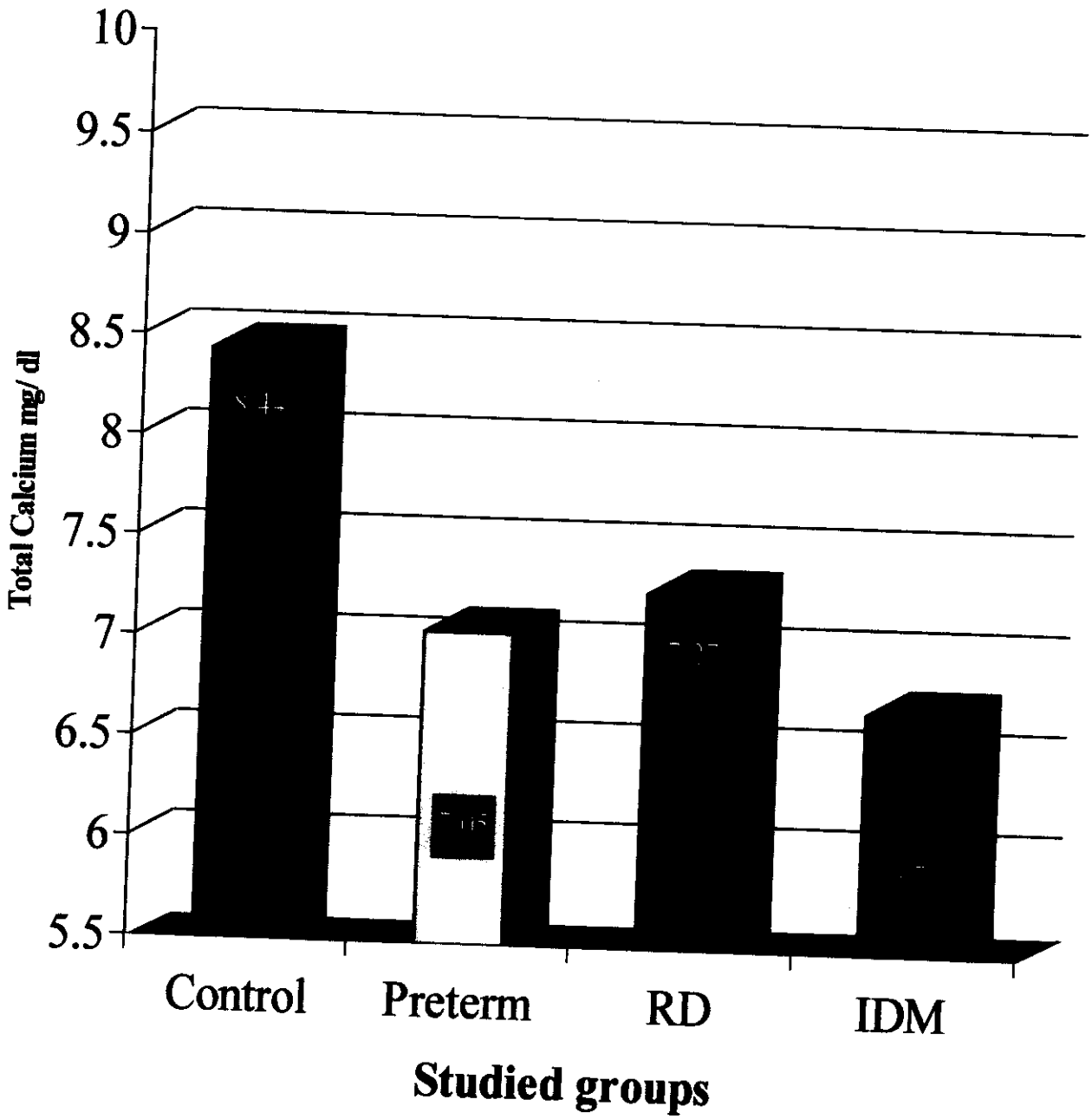


Figure (1) Mean serum calcium mg./dl among the studied groups in the 1st day of life

Table (11): Showed the mean ± S.D of serum phosphate in the 1st and 3rd day of life in the studied groups: There was no significantly difference in serum phosphate between full term control group and other groups either 1st or 3rd day of life ($P > 0.05$) except the group of R.D who showed significantly higher value in 1st day of life ($P < 0.05$).

Table (12) and figure (3): Showed comparison of the mean ± S.D of serum phosphate in 1st and 3rd day of life in all groups. There were signifecantly statistically difference between serum phosphate in 1st and 3rd day of life in all groups except R.D. who showed significantly decrease in 3rd day ($P < 0.009$).

Table (13): Showed the mean ± S.D of serum of Mg level in 1st and 3rd day of life in the studied groups. There were no statistically significantly difference between control and high riske studied groups as regard serum Mg in the 1st day of life ($P > 0.05$). While there were statistically significantly lower level of serum Mg in 3rd day of life in R.D and IDM as compared to control.

Table (14) and figure (4): Showed comparison of mean ± S.D of serum Mg in 1st and 3rd day of life in all groups. The serum Mg had significantly increase in all studied groups in 3rd day of life compared with that level in the 1st day of life ($P < 0.05$).

Table (11): Serum phosphate in 1st, 3rd day of life in healthy full term and high risk groups.

Groups	1st day Mean ± SD	t	P	3rd day Mean ± SD	t	P
- Control	5.23 ± 0.76			4.87 ± 0.58		
- Preterm	4.83 ± 0.86	1.09	> 0.28	4.80 ± 0.66	0.25	> 0.805
- RD	6.65 ± 1.40	4.81	< 0.05*	5.53 ± 1.25	- 1.50	> 0.150
- IDM	5.54 ± 1.81	- 0.50	> 0.62	5.20 ± 1.49	0.65	> 0.523

* P is significant < 0.05

Table (12): Statistical evaluation of the change in serum phosphate observed in 1st and 3rd day of life in different studied groups using (paired t test).

Groups	1st Mean ± SD	3rd Mean ± SD	t_{paired}	P
- Control	5.23 ± 0.76	4.87 ± 0.58	2.20	> 0.55
- Preterm	4.83 ± 0.36	4.80 ± 0.66	0.25	> 0.811
- RD	6.65 ± 1.40	5.53 ± 1.25	3.30	< 0.05*
- IDM	5.54 ± 1.81	5.20 ± 1.49	2.04	> 0.072

* P is significant.

Table (13): Serum magnesium in 1st, 3rd day of life in control full term and high risk groups.

Groups	*1st day* Mean ± SD	t	P	*3rd day* Mean ± SD	t	P
- Control	1.86 ± 0.29			2.22 ± 0.215		
- Preterm	1.78 ± 0.27	0.62	0.54	2. 03 ± 0.270	1.72	0.102
- RD	1.63 ± 0.23	1.88	0.077	1.77 ± 0.830	3.92	0.001*
- IDM	1.62 ± 0.24	1.93	0.05*	1.76 ± 0.196	5.01	0.0001*

* P is significant

Table (14): Statistical evaluation of the change in magnesium level observed in 1st and 3rd day of life in different studied groups using (paired t test).

Groups	*1st* Mean ± SD	*3rd* Mean ± SD	t_{paired}	P
- Control	1.86 ± 0.29	2.22 ± 0.21	- 4.63	0.010*
- Preterm	1.78 ± 0.27	2.03 ± 0.27	- 8.13	0.0001*
- RD	1.63 ± 0.23	1.77 ± 0.27	- 4.47	0.002*
- IDM	1.62 ± 0.24	1.76 ± 0.19	- 4.04	0.003*

* P is significant

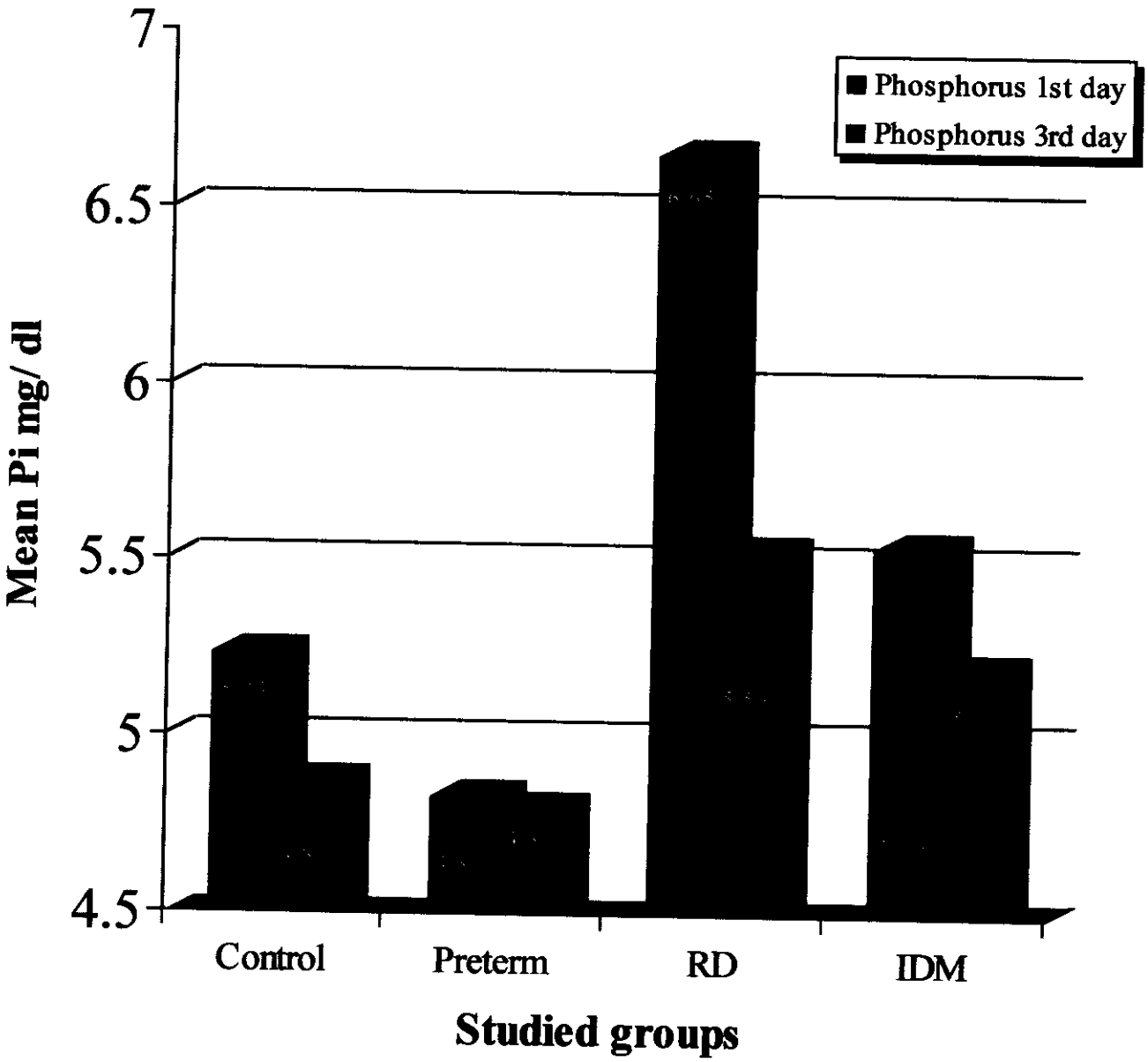


Figure (3) Mean serum phosphorus mg / dl among the studied groups in the 1st & 3rd day of life

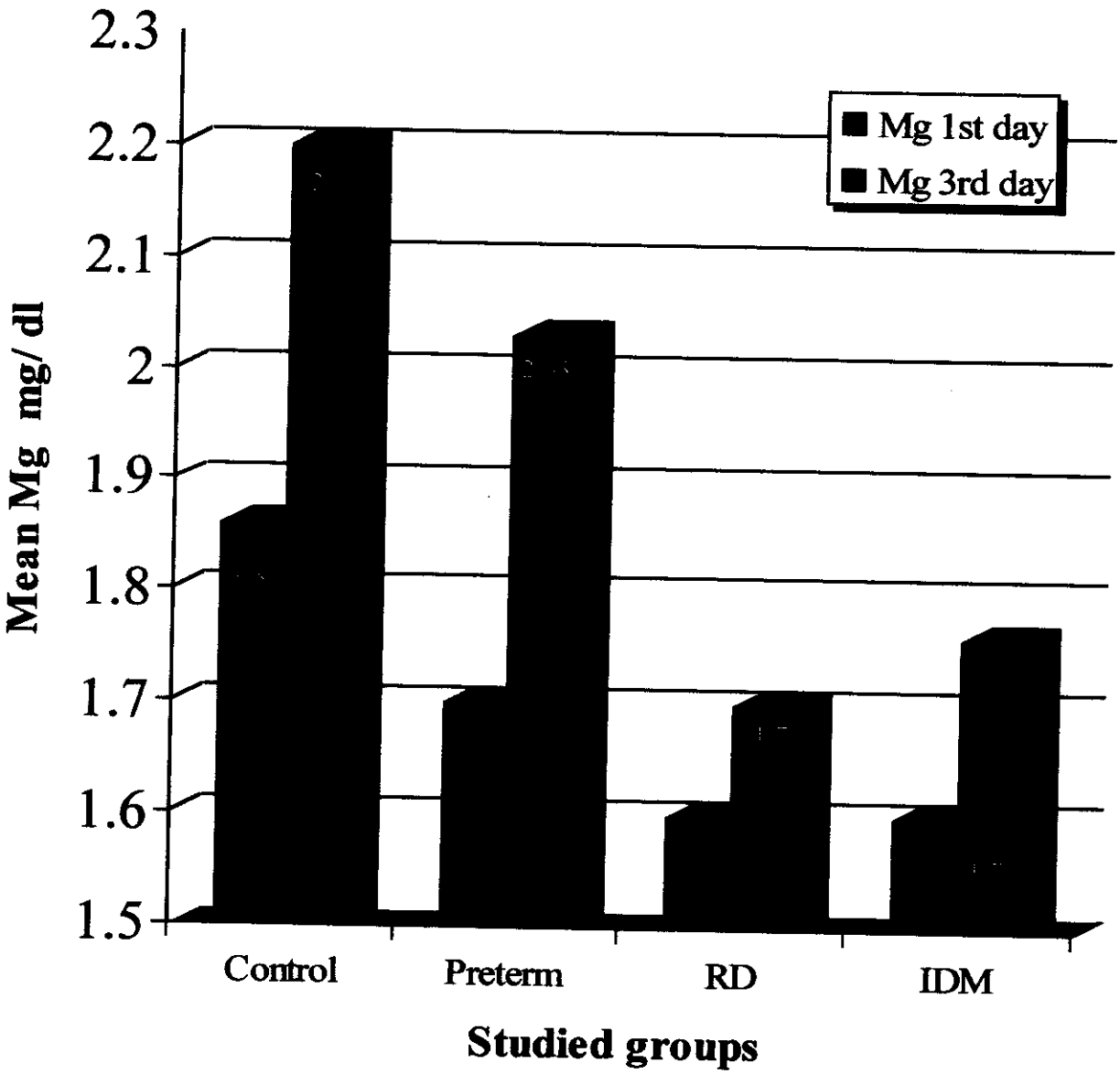


Figure (4) Mean serum Mg mg./dl among the studied groups

Table (15): Showed the mean ± S.D of the serum albumin level in 1st and 3rd day of life in the studied groups: The level of serum albumin in control group was statistically significantly higher than that in high risk group ($P < 0.05$) except in IDM that showing no statistically significantly difference in the 1st day of life ($P > 0.05$) in 3rd day of life the level of serum albumin gm/dl in control full term was also higher than the value in risk group ($P < 0.05$) except in IDM group. that showing no statistically significantly difference ($P > 0.05$).

Table (16) and figure (5): Showed comparison of mean ± S.D of serum albumin level in 1st and 3rd day of life in all groups. The albumin level increased in all studied groups in 3rd day of life except in preterm group ($P < 0.05$).

Table (17): Showed the mean ± S.D of serum level of PTH ng/ml in 1st and 3rd day of life in control full term and high risk studied groups. The level was significantly lowe. in full term control than in other groups in 1st and 3rd day of life ($P < 0.05$).

Table (18) and figure (6): Showed comparison in mean ± S.D serum level of PTH in 1st and 3rd day of life in all studied groups. The level of PTH had significantly increment in all studied groups in 3rd day of life ($P < 0.05$).

Table (19): Showed the mean ± S.D serum level of calcitonin pg/ml in 1st and 3rd day of life in control and high risk groups: Serum calcitonin in 1st day of life in control was significantly lower than the values observed in

preterm and IDM ($P < 0.02$ and 0.002 respictively) and showed no statistically significantly difference with R.D group. In 3rd day of life the level in control was significantly lower than the value observed in IDM ($P < 0.05$) while not significantly different from the value observed in preterm and R.D groups.

Table (20) and figure (7): Showed comparison in mean ± S.D of serum calcitonin in 1st and 3rd day of life in all studied groups. There was significantly lowering of serum calcitonin level in all groups in 3rd day of life ($P < 0.05$).

Table (15): Albumin in 1st, 3rd day of life in control and high risk groups.

Groups	*1st day* *Mean ± SD*	*t*	*P*	*3rd day* *Mean ± SD*	*t*	*P*
- Control	4.36 ± 0.63			4.67 ± 0.479		
- Preterm	3.80 ± 0.63	2.05	0.05*	3.96 ± 0.630	2.83	0.01*
- RD	3.87 ± 0.30	2.36	0.02*	4.01 ± 0.290	2.72	0.02*
- IDM	4.18 ± 0.416	0.80	0.43	4.29 ± 0.384	1.96	0.066

* P is significant

Table (16): Statistical evaluation of albumin in 1st and 3rd day of life in different studied groups using (paired t).

Groups	*1st* *Mean ± SD*	*3rd* *Mean ± SD*	t_{paired}	*P*
- Control	4.36 ± 0.580	4.67 ± 0.489	- 4.21	0.05*
- Preterm	3.80 ± 0.630	3.96 ± 0.630	- 1.67	> 0.12
- RDS	3.87 ± 0.302	4.01 ± 0.290	- 2.94	0.01*
- IDM	4.18 ± 0.410	4.29 ± 0.380	- 2.70	0.02*

* P significant < 0.05

Table (17): Serum PTH in 1st, 3rd day of life in control and high risk groups.

Groups	*1st day* Mean ± SD	t	P	*3rd day* Mean ± SD	t	P
- Control	2.76 ± 0.79			10.77 ± 4.98		
- Preterm	9.77 ± 4.89	- 4.47	< 0.001*	18.79 ± 2.51	- 4.53	< 0.0001*
- RD	8.50 ± 4.82	- 3.71	< 0.002*	23.73 ± 5.41	- 5.57	< 0.0001*
- IDM	6.41 ± 5.15	- 2.21	< 0.04*	17.85 ± 17.05	- 3.05	< 0.05*

* P is significant

Table (18): Statistical evaluation of PTH in 1st and 3rd day of life in different studied groups using (paired t test).

Groups	*1st* Mean ± SD	*3rd* Mean ± SD	t_{paired}	P
- Control	2.76 ± 0.79	10.77 ± 4.98	- 4.76	< 0.001*
- Preterm	9.77 ± 4.89	18.79 ± 2.54	- 5.78	< 0.0001*
- RD	8.50 ± 4.82	23.73 ± 5.41	- 5.82	< 0.0001*
- IDM	6.41 ± 5.15	16.85 ± 14.05	- 3.74	< 0.05*

* P is significant

Table (19): Serum calcition in 1st, 3rd day of life in control and high risk groups.

Groups	1st day Mean ± SD	t	P	3rd day Mean ± SD	t	P
- Control	92.01 ± 37.82			81.59 ± 32.03		
- Preterm	183.55 ± 115.20	- 2.38	< 0.029*	122.68 ± 86.52	- 1.41	> 0.176
- RD	103.36 ± 62.20	- 0.49	0.628	56.23 ± 38.43	1.60	0.126
- IDM	202.89 ± 91.89	- 3.53	< 0.002*	139.07 ± 70.60	- 2.43	< 0.031*

* P is significant

Table (20): Statistical evaluation of serum calcitonin in 1st and 3rd day of life in different studied groups using (paired t test).

Groups	1st Mean ± SD	3rd Mean ± SD	t	P
- Control	92.01 ± 37.82	81.59 ± 32.035	2.57	0.03*
- Preterm	183.55 ± 15.70	122.68 ± 86.520	3.64	0.005*
- RD	103.36 ± 62.20	56.23 ± 38.430	4.76	0.001*
- IDM	202.89 ± 91.89	139.07 ± 70.600	5.15	0.001*

* P is significant

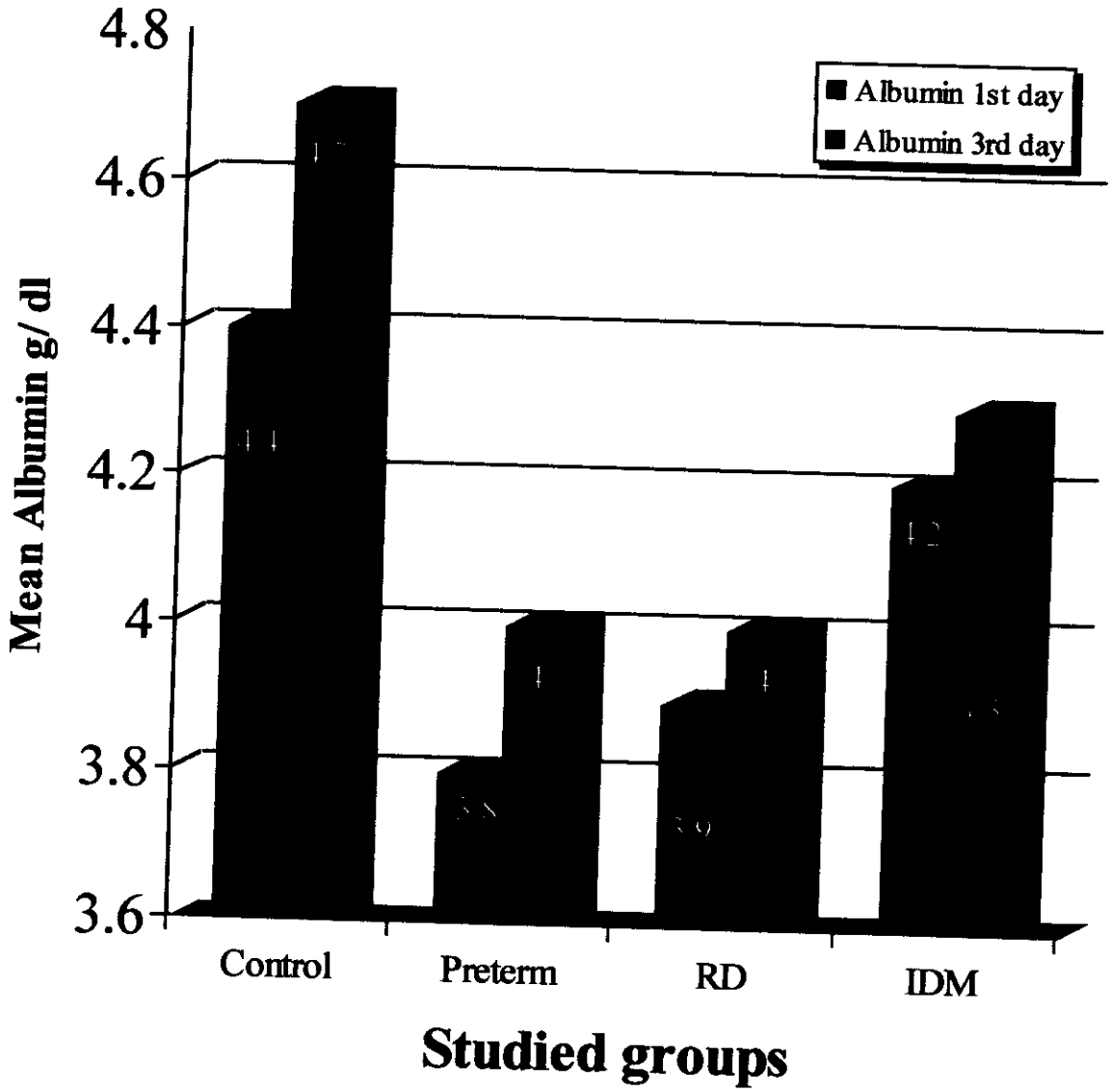


Figure (5) Mean serum albumin g / dl among the studied groups

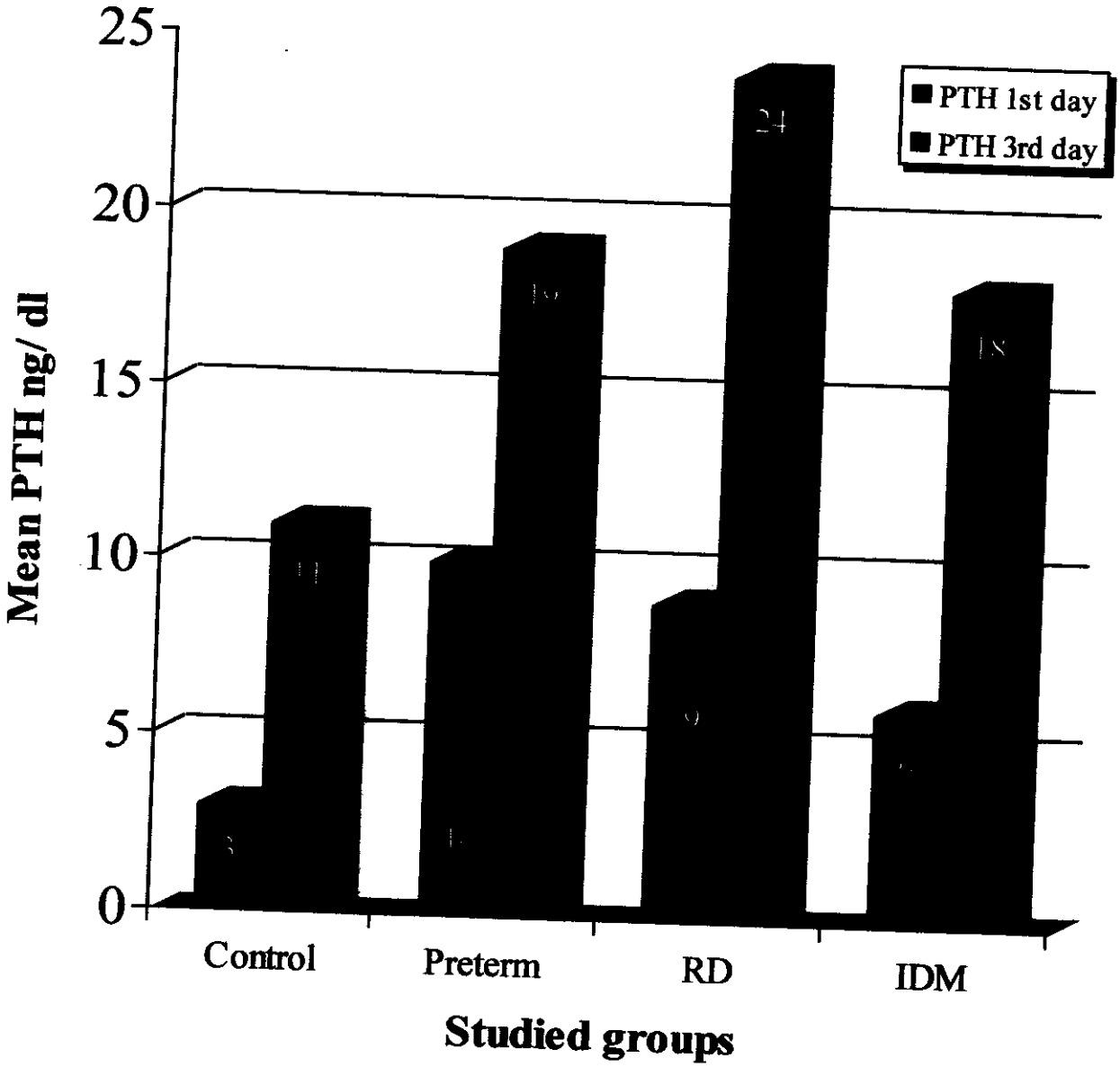


Figure (6) Mean serum PTH ng. / dl among the studied groups

Table (21): Showed the precentage of seizures among studied groups, 5 cases of all studied groups had seizures two of them were R.D, three were IDM.

Table (22): revealed that there was no significant difference between cases with seizures and cases without seizures regarding birth weight and gestational age, while apgar score was significantly decreased at 1 minute and 5 minutes in cases with seizures.

Table (23): Showing the laboratory findings mean ± S.D in cases who developed convulsion compared to non convulsive cases in the 1st day of life. It revealed that in cases with convulsion total serum Ca (5.54 ± 0.37), ionized Ca (3.36 ± 0.18), Mg (1.37 ± 0.1) and blood glucose (24 ± 1.7) were a highly significantly lower ($P < 0.0001$) than those values notcied in cases without convulsion, the phosphate level in cases with convulsion (7.5 ± 0.5) was a highly significantly higher than that value in non convulsive cases.. ($P < 0.0001$), no significant differences was noted between cases with and without convulsion regarding PTH, calcitonin and albumin levels.

Table (24): Showed that total serum Ca (6.54 ± 0.35), serum magnisum (1.5 ± 0.071) in 3rd day of life in cases with seizures were significantly lower than values noted in cases without seizures, the phosphate level in cases with seizures was significantly higher than value noted in cases with out seizures.

Table (21): Occurrence of convulsions among studied groups.

Groups	Seizures		Non seizures	
	N	%	N	%
- Control	0	0	10	100
- Preterm	0	0	10	100
- RD	2	20	8	80
- IDM	3	30	7	70
- Total	5	12.5	35	87.5

Table (22): Gestational age, birth weight and apgar score in cases who developed convulsions compared to non convulsive cases.

	Cases with seizures Mean ± SD	*Cases without Mean ± SD*	*t*	*P*
Number	5	35		
- Gestational ge (wk)	35.00 ± 1.41	36.40 ± 2.150	- 1.40	0.170
- Birth weight	3.17 ± 1.45	2.88 ± 1.035	- 0.54	0.592
- Apgar score:				
* 1 min.	4.00 ± 1.22	5.77 ± 1.430	- 2.62	< 0.013*
* 5 min	7.80 ± 1.30	8.37 ± 0.800	- 4.25	< 0.0001*

P is significant.

Table (23): Laboratory findings (mean ± SD) in cases who developed convulsions compared to non convulsive cases in 1st day of life.

	Cases with seizures Mean ± SD	*Cases without Mean ± SD*	*t*	*P*
Number	5	35		
- Total Ca.	5.54 ± 0.37	7.91 ± 1.46	- 4.25	0.0001**
- Ionized Ca.	3.36 ± 0.18	4.24 ± 0.37	- 5.12	0.0001**
- Phosphate.	7.52 ± 0.50	5.28 ± 1.26	3.87	0.0001**
- Magnisum.	1.37 ± 0.12	1.77 ± 0.25	- 3.47	0.0010**
- PTH.	7.00 ± 5.55	6.84 ± 4.93	0.07	0.94
- Calcitonin	211.86 ± 116.01	135.96 ± 87.26	1.75	0.08
- Albumin	3.78 ± 0.47	4.091 ± 0.3	- 1.22	0.22
- Blood glucose	24 ± 1.7	37.7 ± 5.8	- 3.8	0.005**

** P is a highly significant.

Table (24): Laboratory findings in cases developed convulsions in the 1st day of life after reaching the 3rd day compared to non convulsive cases.

	Cases with seizures Mean ± SD	*Cases without Mean ± SD*	*t*	*P*
Number	5	35		
- Total Ca.	6.52 ± 0.35	8.99 ± 1.46	- 3.69	0.001*
- Ionized Ca.	4.22 ± 1.33	4.44 ± 0.39	- 0.84	0.40
- Phosphate.	6.64 ± 0.88	4.86 ± 0.87	4.47	0.0001*
- Magnisum.	1,50 ± 0.071	2.01 ± 0.26	- 4.20	0.001*
- PTH.	17.14 ± 5.13	17.87 ± 9.50	- 0.17	0.86
- Calcitonin	135.84 ± 71.97	94.75 ± 66.30	1.28	0.20
- Albumin	3.90 ± 0.35	4.28 ± 0.51	- 1.53	0.13
- Blood glucose	48.3 ± 7.6	54.4 ± 6.7	- 1.2	0.2

* P is significant

Table (25): Showed the correlation of total serum calcium to other variables in preterm in 1st and 3rd day of life. In the 1st day of life total serum calcium had a highly significant positive correlation with ionized Ca ($r= 0.84$, $P < 0.002$), PTH ($r= 0.77$, $P < 0.008$), Mg ($r= 0.82$, $P < 0.001$) gestational age ($r= 0.81$, $P < 0.004$), birth weight ($r= 0.82$, $P < 0.003$) and a significant postive correlation with apgar score at 1 min ($r= 0.76$, $P < 0.01$) and 5 min ($r= 0.74$, $P < 0.01$). There was a significant negative correlation was noted between total calcium and both phosphate ($r= - 0.69$, $P < 0.02$) and calcitonin ($r= - 0.65$, $P < 0.03$). In 3rd day of life, there was a highly significant positive correlation between total serum Ca and ionized Ca ($r= 0.82$, $P< 0.003$), PTH ($r= 0.72$, $P< 0.002$), gestotional age ($r= 0.85$, $P= 0.002$), and birth weight ($r= 0.84$, $P< 0.002$). There was a significant negative correlation with calcitonin ($r = - 0.73$, $P < 0.01$).

Table (26): In 1st day of life in infant with RD, total calcium had a highly significant positive correlation with ionized Ca ($r= 0.98$, $P < 0.0001$), Mg ($r= 0.82$, $P < 0.003$), albumin ($r= 0.91$, $P < 0.0001$), birth weight ($r= 0.79$, $P= 0.006$), gestational age ($r= 0.82$, $P < 0.003$) and a significant positive correlation with apgar score at 1minute ($r= 0.62$, $P < 0.05$), 5 minutes ($r= 0.759$, $P < 0.011$), and a highly significant negative correlation with phophate ($r = - 0.8818$, $P < 0.001$) were noticed. In 3rd day of life, significant positive correlation between total serum calcium and other variable, same like 1st day in addition to a highly significant positive correlation with PTH ($P < 0.001$).

Table (27): In 1st day of life in IDM, total serum calcium had a significant positive correlation with ionized calcium (r=0.68, P= 0.03), Mg (r= 0.63, P < 0.04) and a highly positive correlation with blood glucose (r= 0.897, P < 0.0001). Total calcium had a highly significant negative correlation with phosphate (r= - 0.86, P < 0.001) and a significant negative correlation with calcitonin (r= - 0.74, P < 0.01). In 3rd day of life a significant positive correlation was noted between total serum calcium and both albumin (r=0.78, P < 0.05) and gestational age (r= 0.66, P < 0.03). A highly significant negative correlation was found between total serum calcium and both phosphate (r= 0.833, P < 0.003) and calcitonin (r= -0.91, P < 0.0001).

Table (28) and figure (8 & 9): Showed the correlation of total serum calcium in 1st and 3rd day of life to other variables in all our studied cases. In 1st day of life, ionized calcium, Mg, albumin, gestational age and apgar score had a highly significant positive correlation while phosphate, calcitonin had a highly significant negative correlation with total serum calcium. In 3rd day of life similar results were observed, in addition to a highly significant positive correlation with PTH (r = 0.435, P < 0.005).

Table (25): Correlation of total serum Ca in preterm in 1st and 3rd day of life to other variables.

	Total Calcium			
	1st day		3rd day	
	r	*P*	*r*	*P*
- Ionized Ca.	-0.8478	< 0.002**	0.8278	< 0.003**
- Phosphate.	- 0.6944	< 0.02*	0.5338	0.112
- Magnisum	0.823	0.001**	0.5906	0.072
- PTH	-0.7770	< 0.008**	0.832	< 0.002**
- Calcitonin	- 0.6586	< 0.038*	- 0.7365	0.015
- Albumin	0.5624	0.091	0.2585	0.471
- Gestational ge (wk)	0.8115	< 0.004**	0.8566	< 0.002**
- Birth weight	0.8259	< 0.003**	0.8329	< 0.002**
- Apgar:				
* 1 min.	0.7615	< 0.01*		
* 5 min.	0.7414	< 0.014*		

* P is significant. ** P is highly significant.

Table (26): Correlation of total calcium to other variables in 1st and 3rd day of life in infants with RDS.

	Total Calcium			
	1st day		3rd day	
	r	*P*	*r*	*P*
- Ionized Ca.	0.89	0.0001**	0.93	0.0001**
- Phosphate.	- 0.88	0.001**	- 0.56	0.08
- Magnisum	0.82	0.003**	0.77	0.009**
- PTH	0.05	0.874	0.82	0.001**
- Calcitonin	0.13	0.70	0.005	0.98
- Albumin	0.91	0.0001**	0.82	0.003**
- Gestational ge (wk)	0.82	0.003**	0.76	0.01*
- Birth weight	0.79	0.006**	0.75	0.01*
- Apgar:				
* 1 min.	0.62	0.05*		
* 5 min.	0.75	0.01*		

* P is significant. ** P is highly significant.

Table (27): Correlation of total calcium to other variables in 1st and 3rd day of life in IDM's.

	Total Calcium			
	1st day		3rd day	
	r	*P*	*R*	*P*
- Ionized Ca.	0.68	0.03*	- 0.16	0.6
- Phosphate.	- 0.86	0.001**	- 0.83	0.003**
- Magnesium	0.63	0.04*	0.44	0.19
- PTH	0.48	0.15	0.23	0.5
- Calcitonin	- 0.74	0.01*	- 0.91	0.0001**
- Albumin	0.59	0.07	0.78	0.05*
- Gestational ge (wk)	0.63	< 0.04*	0.66	0.03*
- Birth weight	0.05	0.88	0.09	0.7
- Apgar:				
* 1 min.	0.16	0.64		
* 5 min.	0.09	0.79		
- Blood glucose	0.8970	0.0001**	0.1406	0.698

* P is significant. ** P is highly significant.

Table (28): Correlation of total calcium to other variables in 1st and 3rd day of all studied cases.

	Total Calcium			
	1st day		3rd day	
	r	*P*	*r*	*P*
- Ionized Ca.	0.77	0.0001**	0.43	0.005**
- Phosphate.	- 0.61	0.0001**	- 0.5	0.001**
- Magnesium	0.59	0.0001**	0.68	0.0001**
- PTH	0.20	0.2	0.435	0.005**
- Calcitonin	- 0.47	0.002**	- 0.49	0.001**
- Albumin	0.41	0.008**	0.39	0.013
- Gestational ge (wk)	0.54	0.0001**	0.52	0.001**
- Birth weight	- 0.55	0.7	- 0.07	0.665
- Apgar:				
* 1 min.	0.53	0.0001**		
* 5 min.	0.46	0.003**		

* P is significant. ** P is highly significant.

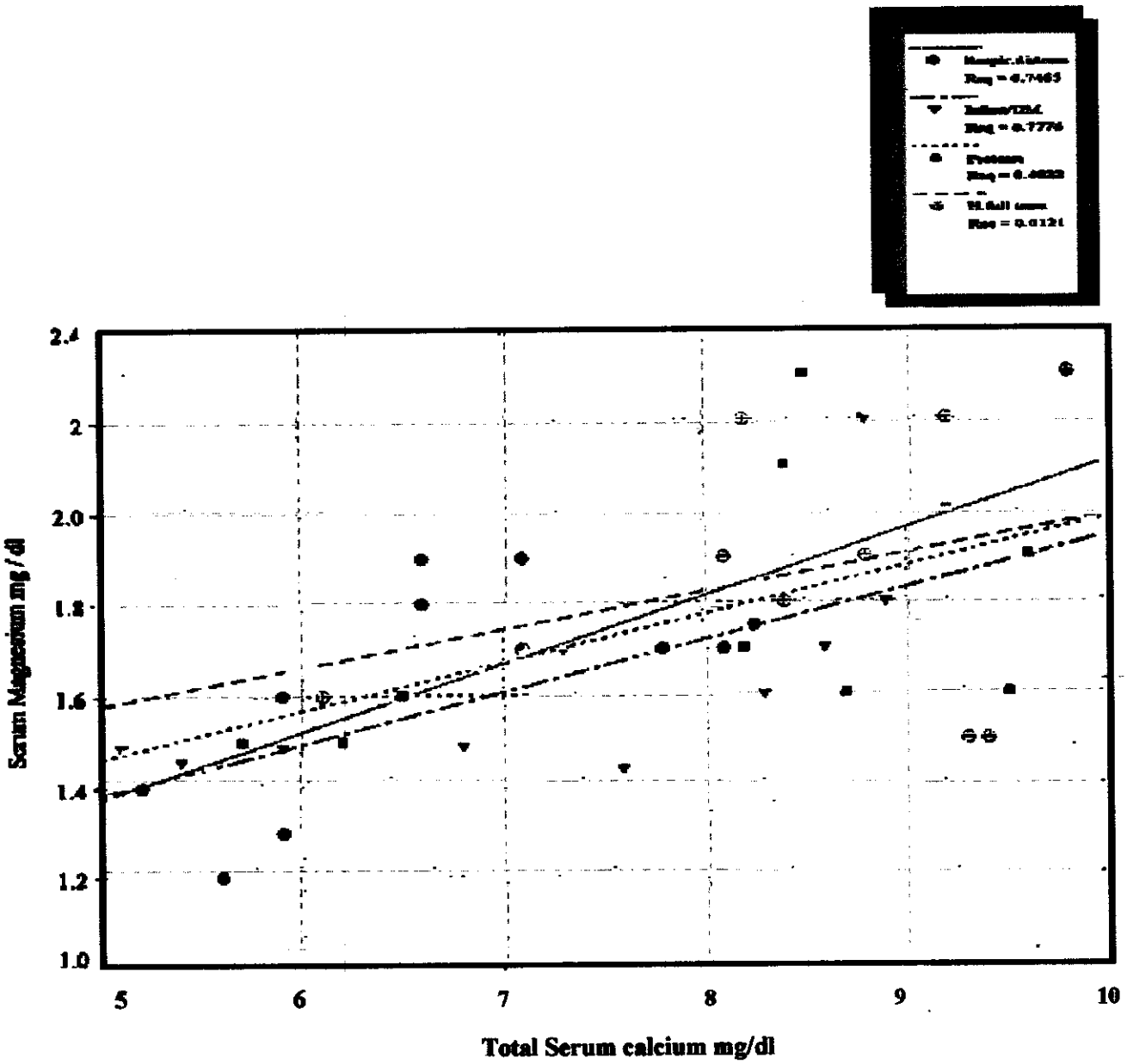


Figure (8): **Scatterplot showing the relation between serum total calcium and serum Mg among studied groups in 1st day of life**

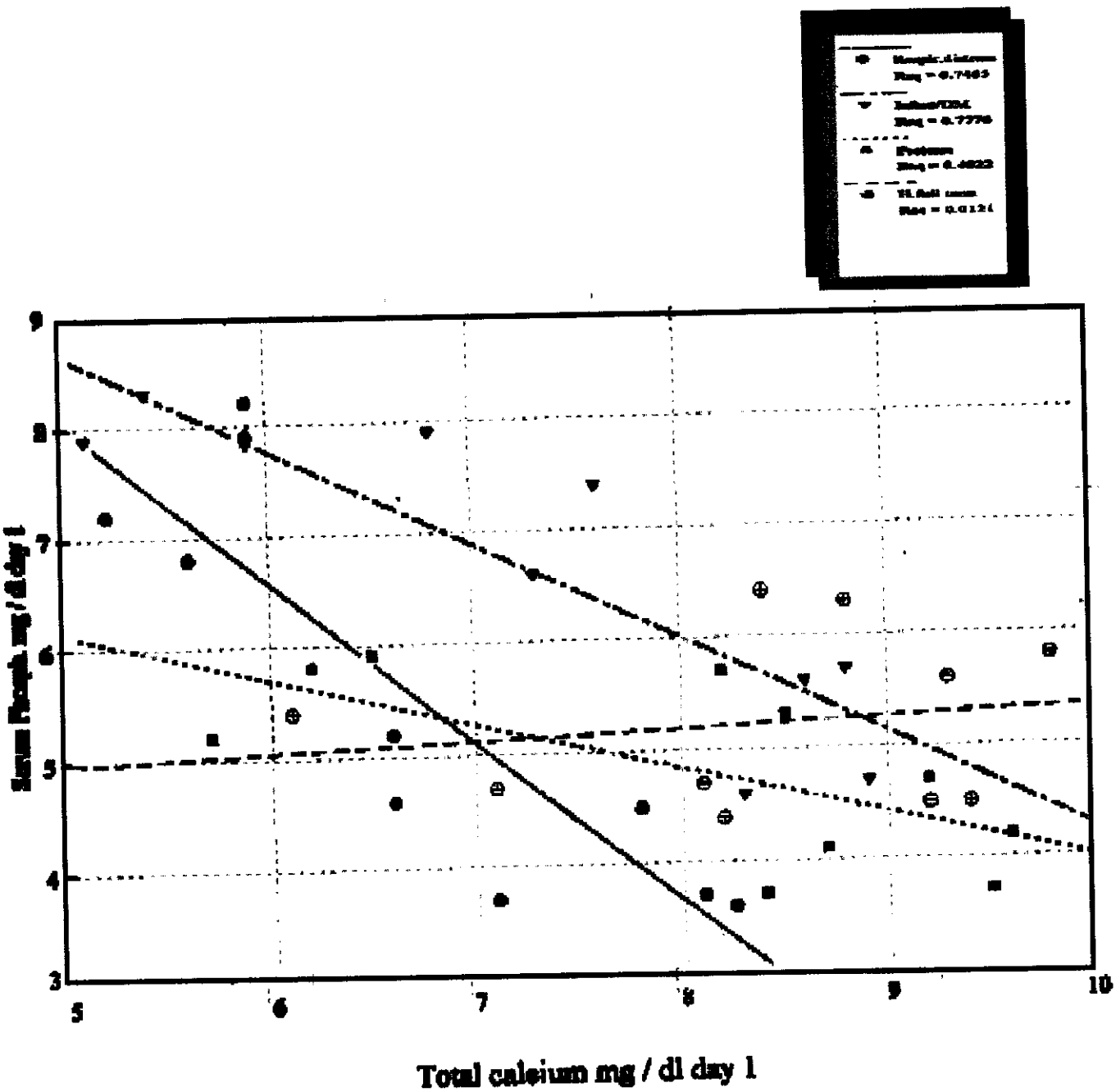


Figure (9): **Scatterplot showing the relation between serum total calcium and serum phosph. Among studied groups in 1st day of life**