RESULTS

Table (1): presentation of some clinical and laboratory data between fullterm patients and control group:

		N	Mean	Std. Deviation	t	p
Gestational age (week)	fullterm	50	39.0600	1.15016		
	control fullterm	10	39.8000	0.91894	1.9	>0.05
Postnatal age (days)	fullterm	50	4.9800	1.07836	0.7	>0.05
	control fullterm	10	4.7000	1.33749		
Weight (kgs)	fullterm	50	3.3948	0.38145	0.1	>0.05
	control fullterm	10	3.4056	0.41642		
Length (cm)	fullterm	50	49.9200	0.82906	1.1	>0.05
	control fullterm	10	55.1000	15.08826		
Head circumference (cm)	fullterm	50	34.7600	1.30243	0.1	>0.05
	control fullterm	10	34.8000	0.91894		
Serum bilirubin (mg/dl)	fullterm	50	13.31	1.724	13.3	<0.001
	control fullterm	10	8.73	1.129		
Serum Ca++ (mg/dl)	fullterm	50	8.8172	0.90105	1.7	>0.05
	control fullterm	10	9.3300	0.67831		

		full term		control full term		Total		X^2	p
		No.	%	No.	%	No.	%		
Sex	F	26	52.0%	4	40.0%	30	50.0%	0.1	>0.05
	M	24	48.0%	6	60.0%	30	50.0%		
	Total	50	100.0%	10	100.0%	60	100.0%		

		full term		control full term		Total		X^2	p
		No.	%	No.	%	No.	%		
Mode of delivery	C.S	27	54.0%	6	60.0%	33	55.0%	0.1	>0.05
	N.V.D	23	46.0%	4	40.0%	27	45.0%		
	Total	50	100.0%	10	100.0%	60	100.0%		

There is no significant difference between fullterm and control fullterm as regard clinical data.

There is no significant difference between fullterm and control fullterm as regard mode of delivery and sex distribution.

Table (2): Mean and standard deviation (± SD)of some clinical data between preterm patients and control group.

		N	Mean	SD	t	p
Gestational age (weeks)	preterm	50	35.4200	0.73095	0.5	>0.05
	control preterm	10	35.3000	0.67495		
Postnatal age (days)	preterm	50	4.5200	0.95276	2.9	<0.05
	control preterm	10	3.6000	0.51640		
Weight (kgs)	preterm	50	2.87440	0.207258	4.4	<0.05
	control preterm	10	2.55500	0.212720		
Length (cm)	preterm	50	48.6600	0.68839	1.3	>0.05
	control preterm	10	55.1000	15.08826		
Head circumference (cm)	preterm	50	33.8600	0.80837	3.3	<0.05
	control preterm	10	34.8000	0.91894		

		Preterm		Control Preterm		Total		X^2	P
		No.	%	No.	%	No.	%		
Sex	F	28	56.0%	7	70.0%	35	58.3%	0.2	>0.05
	M	22	44.0%	3	30.0%	25	41.7%		
	Total	50	100.0%	10	100.0%	60	100.0%		

		Preterm		control Preterm		Total		X^2	P
		No.	%	No.	%	No.	%		
Mode of delivery	C.S	16	32.0%	5	50.0%	21	35.0%	0.5	>0.05
	V.D	34	68.0%	5	50.0%	39	65.0%		
	Total	50	100.0%	10	100.0%	60	100.0%		

There is a significant difference between preterm patients and control group as regard postnatal age, weight and head circumference

There is no significant difference between preterm patients and control group as regard sex and mode of delivery.

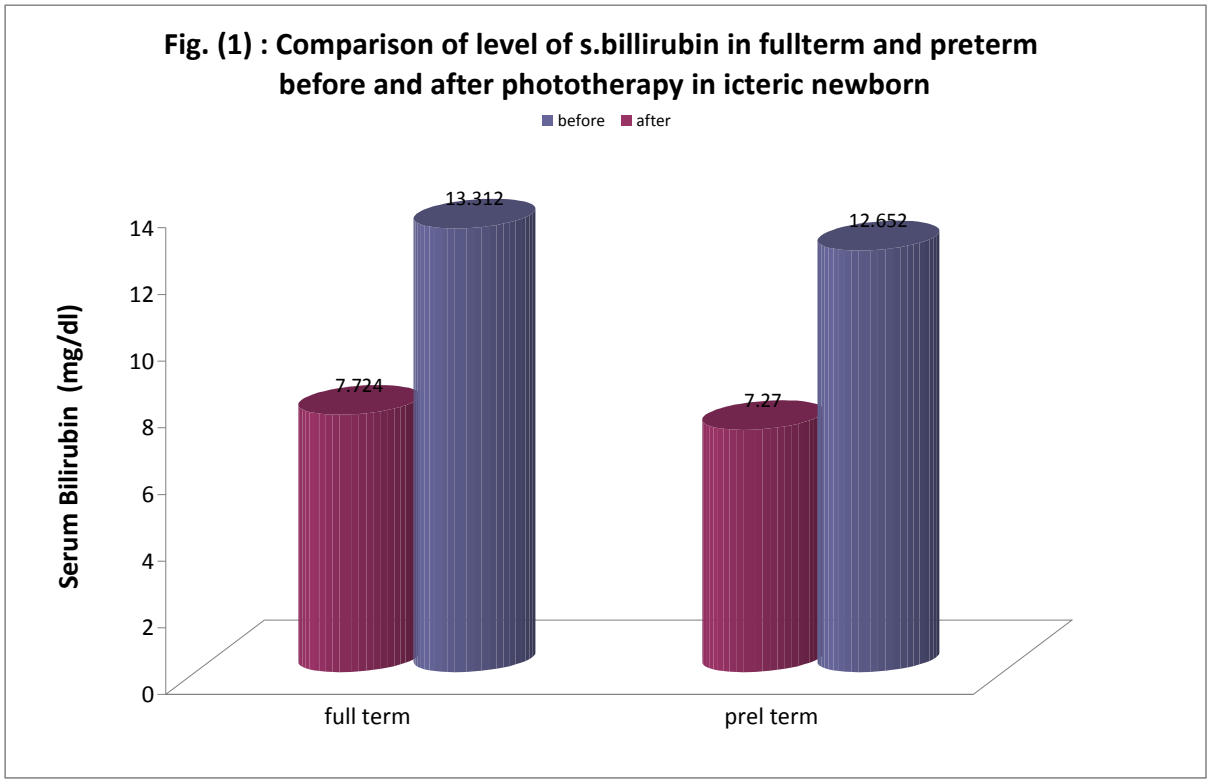
Table (3): Mean and standard deviation (± SD) of duration of phototherapy in hours and some laboratory data between fullterm and preterm group

		N	Mean	t	p
Hb (gm%)	fullterm	50	13.6540	4.1	<0.001
	Preterm	50	12.4540		
Retics (%)	fullterm	50	2.3400	5.5	<0.001
	preterm	50	1.3320		
Total serum bilirubin Before Phototherapy (mg/dl)	fullterm	50	13.3120	2.2	<0.05
	preterm	50	12.6520		
Total serum bilirubin after phototherapy (mg/dl)	fullterm	50	7.7240	2.7	<0.05
	preterm	50	7.2700		
Duration of Phothotherapy (hours)	fullterm	50	63.1200	0.9	>0.05
	preterm	50	61.2000		

Table (4): Comparison of total serum bilirubin before and after phototherapy in fullterm and preterm neonates

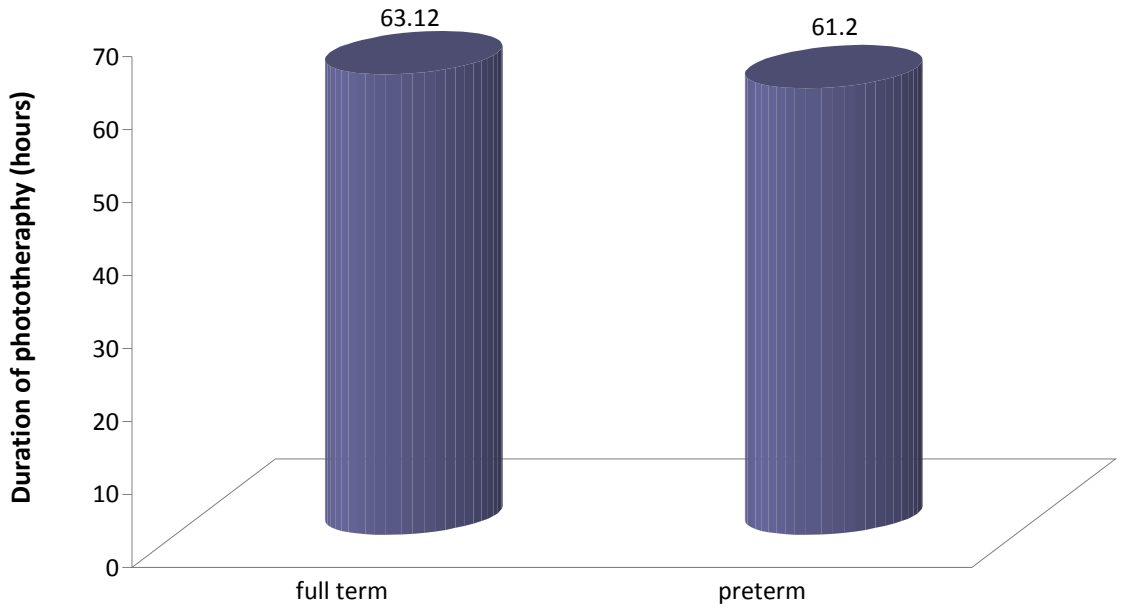
		N	Mean	Std. Deviation	t	p
Fullterm	Serum bilirubin Before Phototherapy	50	13.3120	1.72421	42.6	<0.001
	Serum bilirubin after phototherapy	50	7.7240	.88146		
Preterm	Serum bilirubin Before Phototherapy	50	12.6520	1.27907	57.5	<0.001
	Serum bilirubin after phototherapy	50	7.2700	0.77440		

There was a highly significant difference in serum bilirubin level before and after phototherapy in both fullterm and preterm neonates



This figure shows decrease level of serum bilirubin after phototherapy ($P < 0.001$ that it is a highly statistical significant difference).

Fig. (2) : Comparison of Duration of phototherapy per hours in fullterm and preterm icteric newborns



This figure shows duration of exposure to phototherapy in fullterm more than preterm ($P > 0.05$) .

Table (5): Comparison between control and preterm neonates as regards serum bilirubin and serum Ca^{++}:

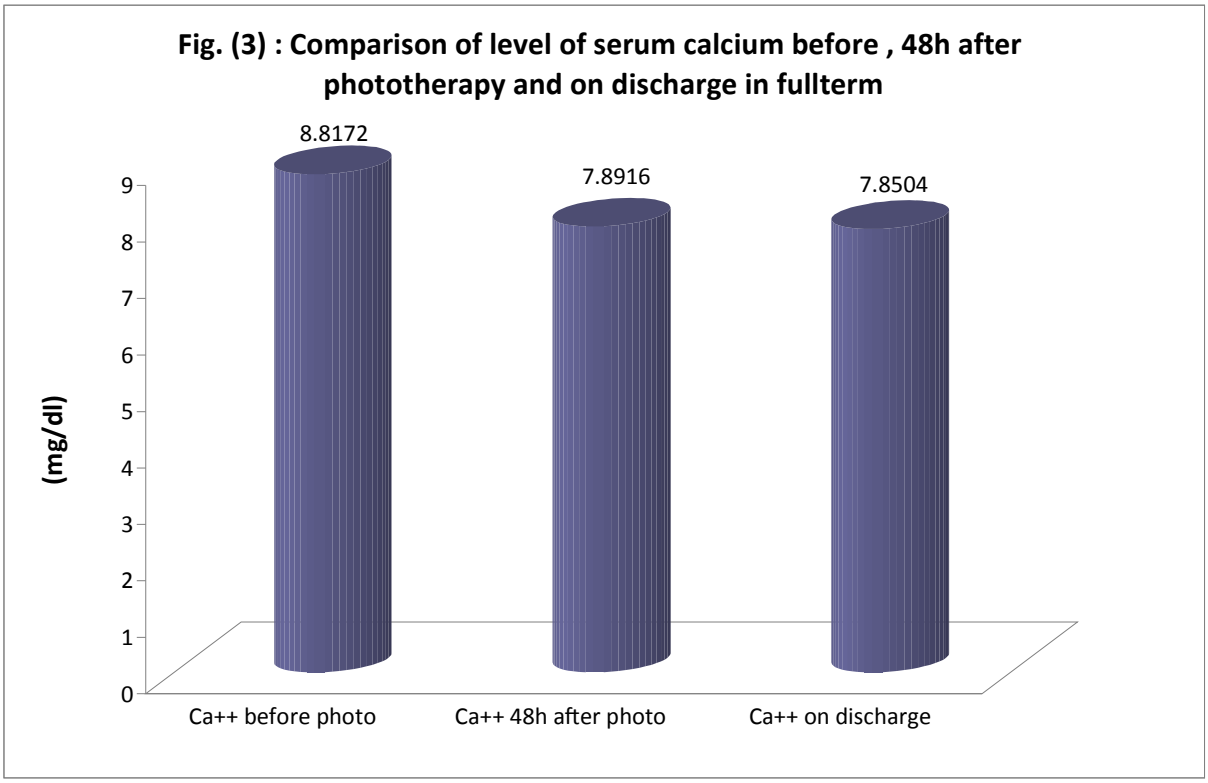
		N	Mean	Std. Deviation	t	p
Serum bilirubin(mg/dl)	Preterm before phototherapy	50	12.6520	1.27907	19.8	<0.001
	Control pre term	10	7.4300	0.62548		
Serum Ca++ (mg/dl)	Preterm before phototherapy	50	7.8838	0.30921	3.6	<0.05
	Control preterm	10	8.8000	0.80416		

There was a significant difference between preterm patients and control group before phototherapy as regard serum bilirubin and total serum calcium (mg%).

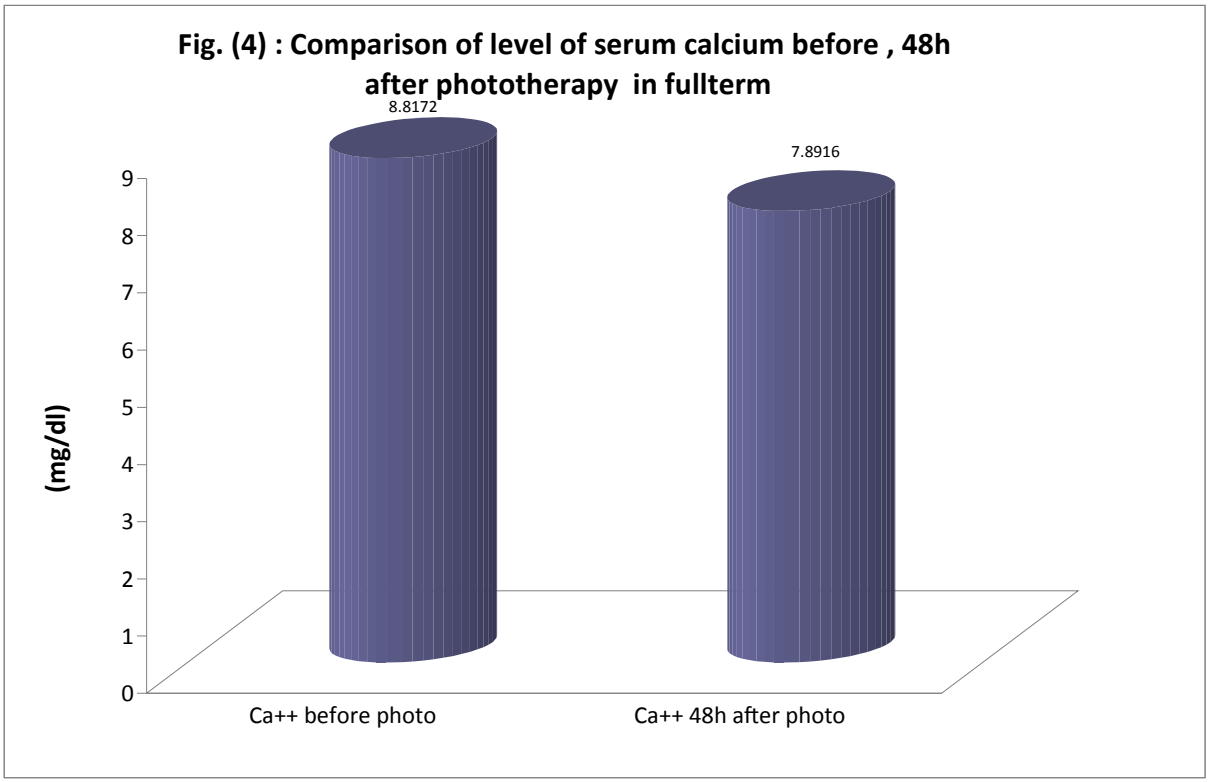
Table (6): Serum Ca^{++} level before , after 48h of phototherapy and on discharge in fullterm group:

	N	Minimum	Maximum	Mean	Std. Deviation	P
Ca++ before photo (mg%)	50	7.27	10.90	8.8172	0.90105	< 0.001
Ca++ 48h after photo	50	6.94	10.00	7.8916	1.08253	
Ca++ on discharge	27	6.60	10.00	7.8504	0.99748	

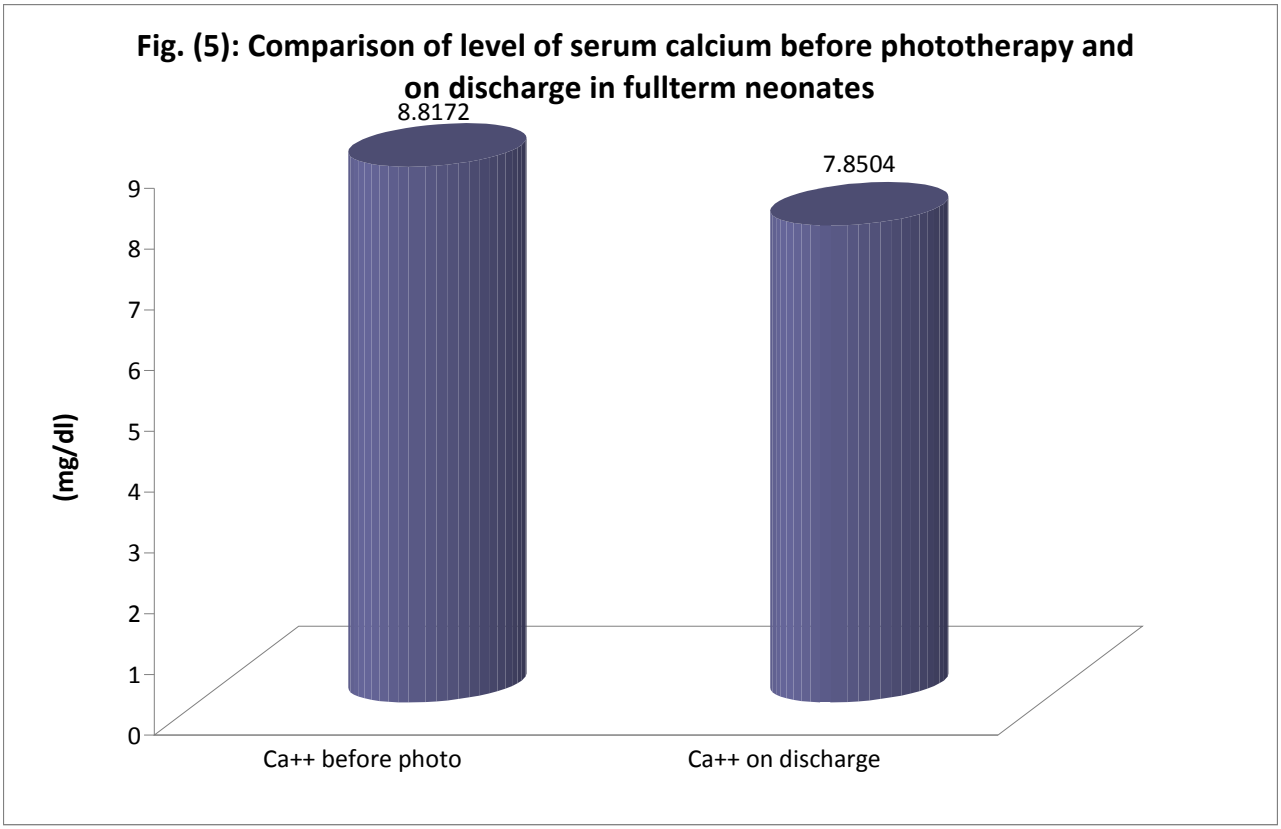
There was a reduction in total serum calcium 48 hours after phototherapy and on discharge than before phototherapy in fullterm neonates (there is a highly statistical significant difference $P < 0.001$).



There was a reduction in serum calcium after 48 hours phototherapy and on discharge than before phototherapy in fullterm neonates (there is a highly statistical significance difference $P < 0.001$).



There was a reduction in serum calcium after 48 hours phototherapy than before phototherapy in fullterm neonates ($P < 0.001$ that it is a highly statistical significant difference).

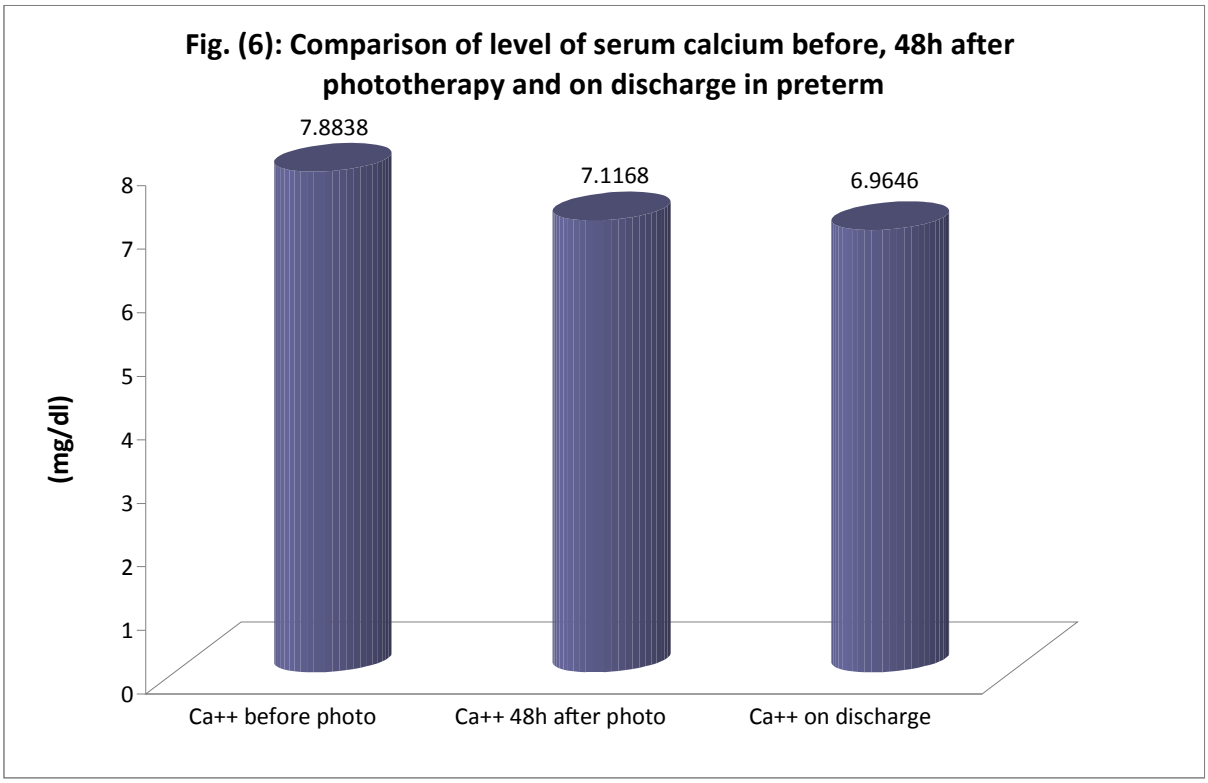


There was a reduction in serum calcium on discharge than before phototherapy in fullterm neonates ($P < 0.001$ that it is a highly statistical significant difference).

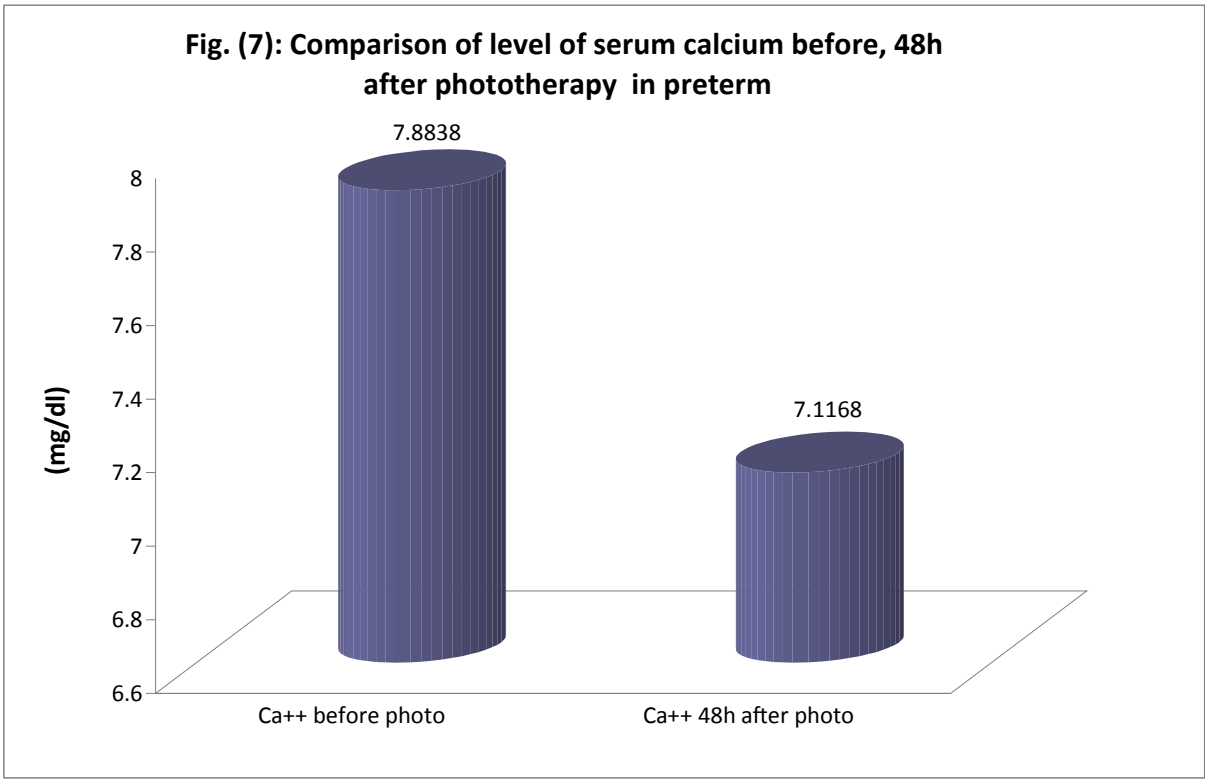
Table (7): Serum Ca^{++} (mg%) level before , after 48h of phototherapy and on discharge in preterm group:

	N	Minimum	Maximum	Mean	Std. Deviation	P
Ca++ before photo	50	7.44	8.41	7.8838	0.30921	< 0.001
Ca++ 48h after photo	50	7.01	8.02	7.1168	0.55416	
Ca++ on discharge	22	7.33	8.02	6.9646	0.51596	

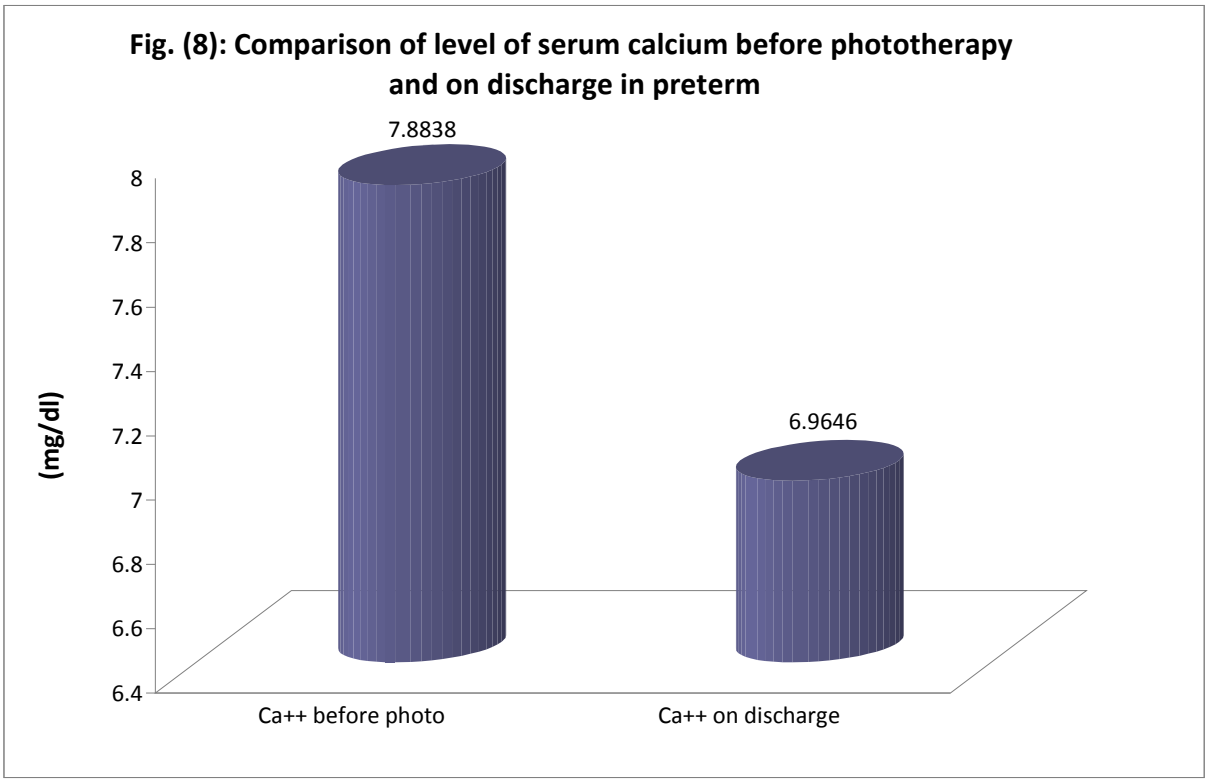
There was a reduction in total serum calcium after phototherapy and on discharge than before phototherapy in preterm neonates (P < 0.001 that it is a highly statistical significant difference).



There was a reduction in serum calcium after 48 hours phototherapy and on discharge than before phototherapy in preterm neonates (there is a highly statistical significant difference P < 0.001).



There was a reduction in serum calcium after 48 hours phototherapy than before phototherapy in preterm neonates ($P < 0.001$ that it is a highly statistical significant difference).



There was a reduction in serum calcium on discharge than before phototherapy in preterm neonates ($P < 0.001$ that it is a highly statistical significant difference).

Table (8): Comparison between serum Ca^{++} level before and after 48 h of phototherapy in fullterm and preterm neonates:

		N	Mean	Std. Deviation	t	p
full term	Ca++ before photo	50	8.8172	0.90105	9.3	<0.001
	Ca++ 48h after photo	50	7.8916	1.08253		
pre term	Ca++ before photo	50	7.8838	0.30921	9.1	<0.001
	Ca++ 48h after photo	50	7.1168	0.55416		

There was a reduction in total serum calcium 48 hours after phototherapy than before phototherapy in both fullterm and preterm neonates.

Table (9): Comparison between Ca^{++} level before phototherapy and on discharge in fullterm and preterm neonates:

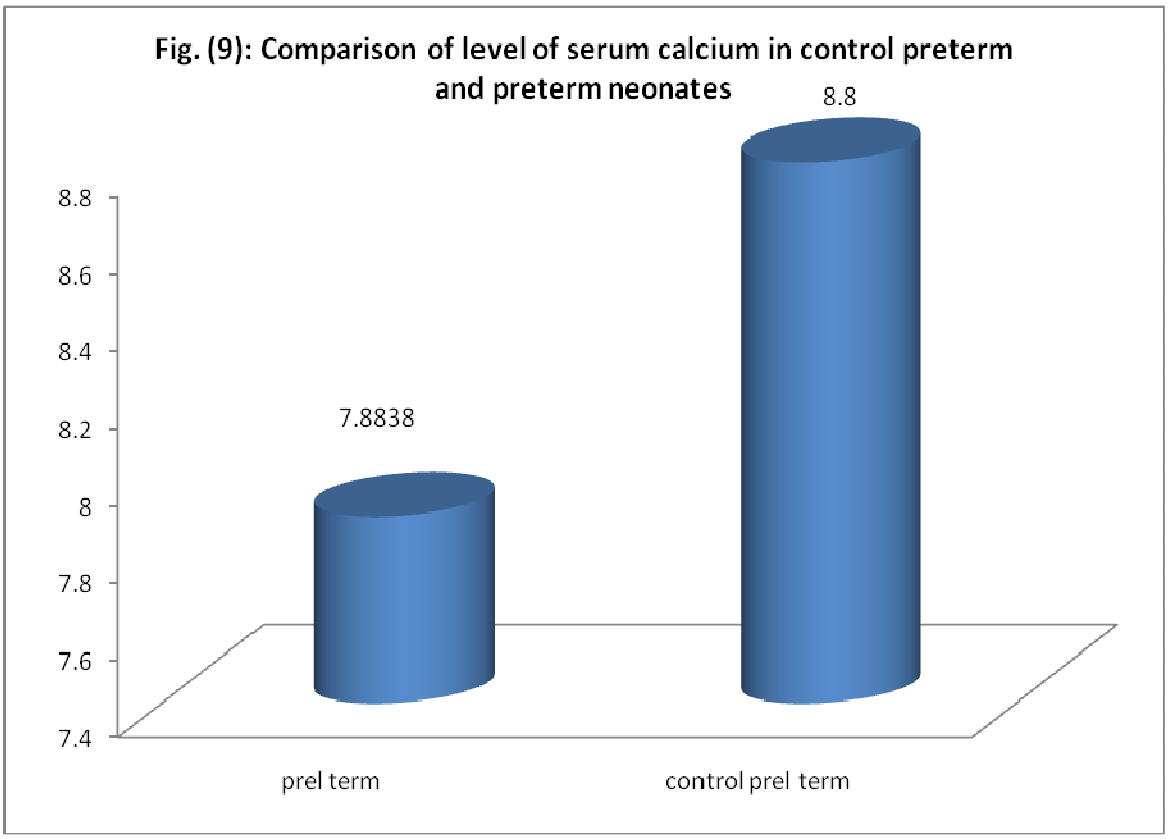
		N	Mean	Std. Deviation	t	p
full term	Ca++ before photo	27	8.9341	0.64040	9.7	<0.001
	Ca++ on discharge	27	7.8504	0.99748		
pre term	Ca++ before photo	22	7.9491	0.27747	9.3	<0.001
	Ca++ on discharge	22	6.9646	0.51596		

There was a reduction in total serum calcium on discharge than before phototherapy in both fullterm and preterm neonates.

Table (10): Comparison between fullterm and preterm neonates as regards serum Ca^{++} level before, after 48 h of phototherapy and on discharge.

		N	Mean	Std. Deviation	t	p
Serum Ca++ before phototherapy	fullterm	50	8.8172	.90105	6.9	<0.001
	preterm	50	7.8838	.30921		
Serum Ca++ 48h after phototherapy	fullterm	50	7.8916	1.08253	3.6	<0.05
	preterm	50	7.1168	.55416		
Serum Ca++ on discharge	fullterm	27	7.8504	.99748	4.2	<0.05
	preterm	22	6.9646	.51596		

There was a significant decrease in total serum calcium in both fullterm and preterm neontates before, 48 hours after phototherapy and on discharge.



(P < 0.05 that it is statistical significant difference).

Table (11): Correlation between serum Ca^{++} level and gestational age, duration of phototherapy and adequacy of breastfeeding.

	Total serum Ca++	
	Pearson Correlation	**Sig. (2-tailed)**
Gest age (weeks)	0.457**	.000
Duration in hours of Phototheraphy	-0.205*	.041

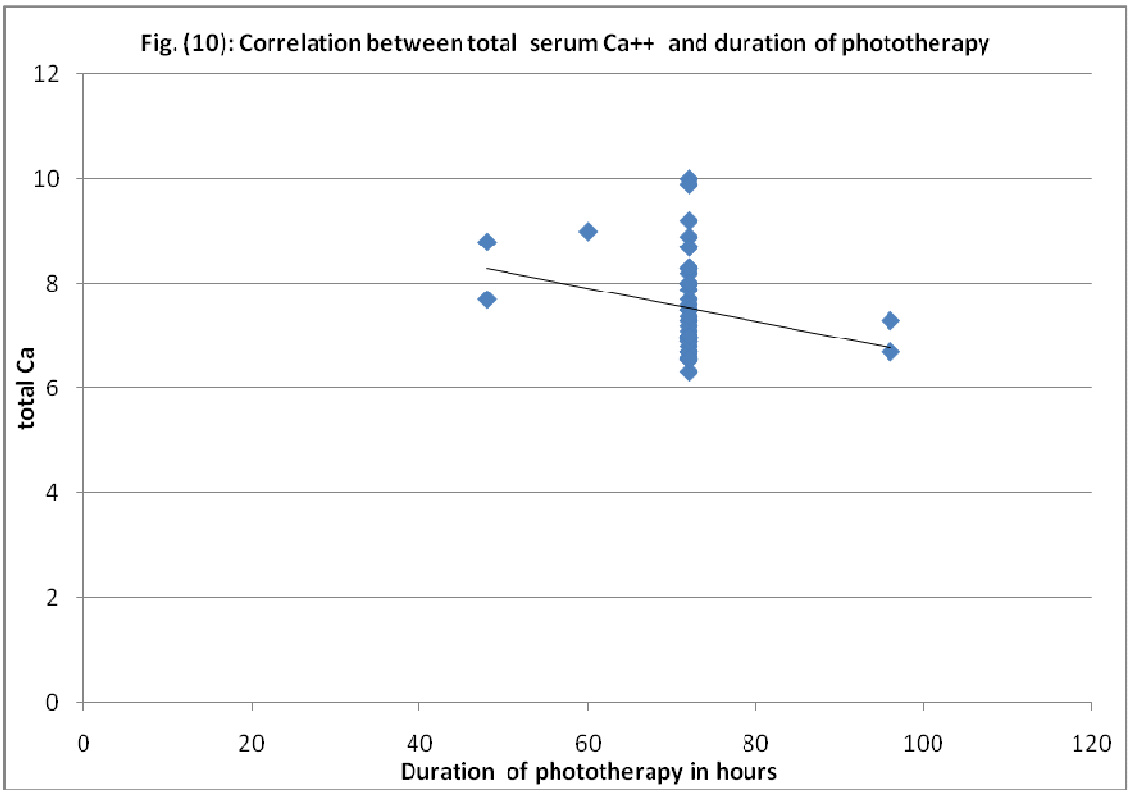
P<0.05 = significant P>0.05= not significant

* Pearson correlation coefficient between duration of phototherapy and total serum calcium was – 0.205 and P < 0.05.

- There is a negative correlation between total serum calcium and duration of phototherapy.

* Pearson correlation coefficient between gestational age and total serum calcium was 0.457 and P < 0.05.

- There is a positive correlation between total serum calcium and gestational age.



Showing decrease in total serum calcium with increase in duration of phototherapy in both fullterm and preterm.

Table (12): Percentage of jitterness in hypocalcaemic fullterm and preterm during phototherapy.

Clinical sign	Preterm		Fullterm	
	No.	%	No.	%
Jitterness	6	12%	4	8%

- Among 50 preterm babies of cases group 6 had jitterness
- Among 50 fullterm babies of cases group 4 had jitterness

Table (13): Prevalence of hypocalcemia induced by phototherapy in icteric newborns.

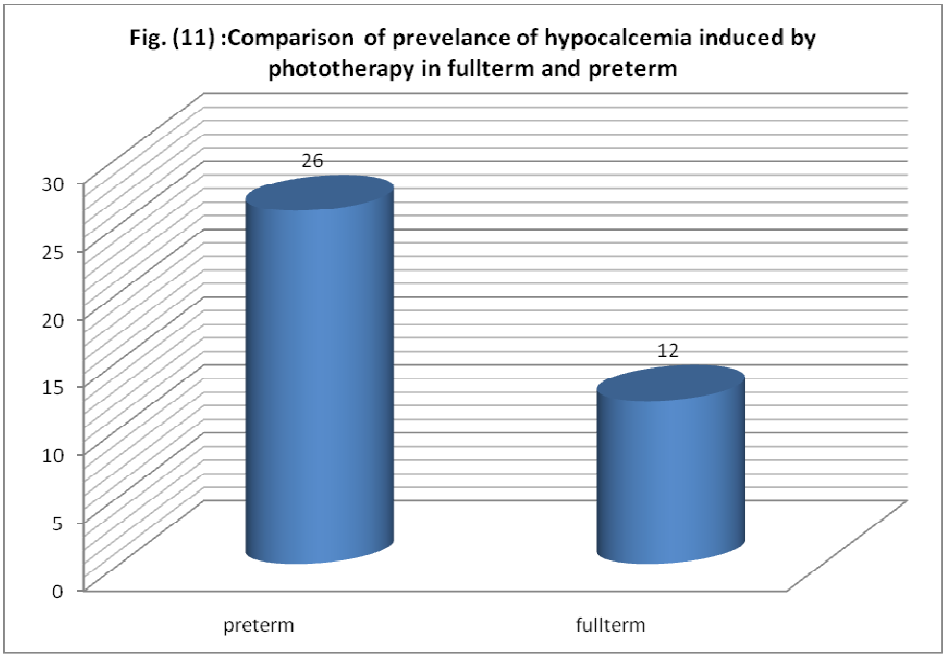
No	Percent
19	19%

Table (14): Comparison of prevalence of hypocalcemia induced by phototherapy between fullterm and preterm icteric newborns

No	Percent	No	Percent
Preterm		Fullterm	
13	26	6	12

Z= 1.8 P ≤ 0.05

There was significant difference between prevalence of hypocalcemia in premature (26%) and fullterm neonates (12%).



This figure show prevalence of hypocalcemia induced by phototherapy in preterm (26%) more than fullterm (12%)