Table (1): Distribution of the studied neonates according to sex, maternal disease and mode of delivery, cause of jaundice and mode of treatment (n = 100)

Item	No.	%
Sex		
Male	51	51.0
Female	49	49.0
Maternal disease		
Diabetes Mellitus	13	13.0
Preeclampsia	12	12.0
Medically free mothers	75	75.0
Mode of delivery		
Vaginal delivery	32	32.0
Cesarean section	68	68.0
Cause of jaundice		
Non Haemolytic jaundice	72	72.0
ABO incompatibility	18	18.0
RH incompatibility	10	10.0
Phototherapy		
Conventional phototherapy	66	66.0
Bilisphere then conventional phototherapy	34	34.0
IVIG treated infants	22	22.0

Table (2): Descriptive analysis of the studied neonates (n = 100)

Measures	Min. – Max.	Mean ± SD.
Age (days)	2.0 –23.0	4.70 ± 3.35
Body weight (kg)	2.0 –4.10	3.14 ± 0.49
Length (cm)	48.0 –51.0	49.98 ± 0.68
Skull circumference (cm)	33.50 –36.0	34.82 ± 0.45
Gestational age (weeks)	37.0 –40.0	37.49 ± 0.67
Age of receiving photo (days)	2.0 –23.0	4.63 ± 3.31
Phototherapy duration (days)	0.0 –10.0	2.33 ± 1.40

Table (3): Comparison of laboratory investigations before and after phototherapy

Item	Before	After	p
TSB			
Mean ± SD.	16.51 ± 2.11	7.49 ± 1.23	<0.001*
Decrease	**9.03 ± 2.34**		
DSB			
Mean ± SD.	1.05 ± 0.24	0.31 ± 0.25	<0.001*
Decrease	**0.74 ± 0.36**		
Urea			
Mean ± SD.	22.73 ± 5.87	20.50 ± 5.40	<0.001*
Decrease	**2.23 ± 5.25**		
Creatinine			
Mean ± SD.	0.56 ± 0.12	0.41 ± 0.12	<0.001*
Decrease	**0.15 ± 0.13**		
ALT			
Mean ± SD.	27.79 ± 8.51	24.60 ± 8.49	<0.001*
Decrease	**3.19 ± 5.83**		
AST			
Mean ± SD.	29.84 ± 8.23	26.83 ± 6.95	<0.001*
Decrease	**3.01 ± 6.34**		
ALP			
Mean ± SD.	250.0 ± 46.95	244.5 ± 44.86	0.227
Decrease	**5.47 ± 45.01**		
Na			
Mean ± SD.	136.5 ± 12.85	135.8 ± 2.75	0.605
Decrease	**0.70 ± 13.57**		
K			
Mean ± SD.	4.48 ± 1.19	3.85 ± 0.53	<0.001*
Decrease	**0.63 ± 1.15**		
Ca			
Mean ± SD.	9.08 ± 0.63	7.70 ± 0.90	<0.001*
Decrease	**1.38 ± 0.87**		

p: p value for Paired t-test for comparing different parameters between Before and After

phototherapy. *: Statistically significant at $p \leq 0.05$

TSB: total serum bilirubin, DSB: direct serum bilirubin, ALT: alanine aminotransferase,

AST: aspartate transaminase, ALP: alkaline phosphatase, Ca: calcium, Na: sodium, K: potassium

Table (4): Relation between mode of treatment and laboratory investigations for all studied neonates (n = 100)

Item	Treatment			p-value
	Group I	Group II	Group III	
	Only phototherapy (n = 66)	Bilisphere then phototherapy (n = 12)	IVIG and Bilisphere then phototherapy (n = 22)	
Decrease in TSB				
Mean ± SD.	8.37 ± 1.66	11.20 ± 2.22	9.83 ± 3.15	<0.001*
Median	8.0	11.0	10.25	
Decrease in DSB				
Mean ± SD.	0.74 ± 0.32	0.61 ± 0.33	0.83 ± 0.45	0.233
Median	0.80	0.70	0.80	
Decrease in Urea				
Mean ± SD.	1.89 ± 6.10	3.83 ± 3.46	2.36 ± 2.63	0.191
Median	2.0	3.0	2.0	
Decrease in Creatinine				
Mean ± SD.	0.13 ± 0.13	0.23 ± 0.12	0.16 ± 0.11	0.017*
Median	0.10	0.20	0.20	
Decrease in ALT				
Mean ± SD.	3.52 ± 5.85	4.08 ± 5.78	1.73 ± 5.79	0.366
Median	2.0	5.0	3.0	
Decrease in AST				
Mean ± SD.	2.91 ± 6.74	4.25 ± 7.34	2.64 ± 4.41	0.394
Median	2.0	5.50	3.0	
Decrease in ALP				
Mean ± SD.	8.32 ± 45.08	6.25 ± 55.70	3.32 ± 39.05	0.948
Median	3.50	6.0	5.0	
Decrease in Na^+				
Mean ± SD.	0.46 ± 16.39	2.25 ± 3.65	3.34 ± 4.17	0.177
Median	1.0	2.0	2.0	
Decrease in K^+				
Mean ± SD.	0.63 ± 1.29	0.56 ± 0.57	0.67 ± 0.93	0.654
Median	0.30	0.50	0.50	
Decrease in Ca				
Mean ± SD.	1.32 ± 1.02	1.51 ± 0.55	1.48 ± 0.39	0.009*
Median	1.15	1.50	1.30	

p: p value for Mann Whitney test for association between different categories

*: Statistically significant at $p \leq 0.05$

TSB: total serum bilirubin, DSB: direct serum bilirubin, ALT: alanine aminotransferase, AST: aspartate transaminase, ALP: alkaline phosphatase, Ca: calcium, Na: sodium, K: potassium