



Clinical Profile of Hypernatremic Dehydration in Late Pre-Term & Term Babies at Tertiary Care Center

A Prospective Observational Study by Dr. Sunil Mehendiratta, Venkateshwar hospital, New Delhi, India

MATERIAL & METHODS: This study was conducted at tertiary care hospital for 1 year between September 2020 till August 2021. Inborn babies with gestation age of > 35 weeks and having significant weight loss (loss of >10 % of birth weight) or having signs of dehydration and hypernatremia (serum sodium > 145 mEq/L) were included. A total of 987 deliveries were conducted during the study period. All newborns were monitored for weight loss and clinical signs of dehydration during their stay and in the outpatient department. Newborns having significant weight loss and signs of dehydration were further investigated

RESULTS: Out of 987 deliveries conducted during study period, 934 were eligible to be included in the study. 57 (6.1%) patients were found to be having hypernatremic dehydration. The incidence divided into early neonatal period (day 1 - 7 of life) and late neonatal period (> day 7 till day 28 of life) was found to be 5.7 % and 0.43 % respectively. Incidence in females (7.62%) was more as compared to males (23, 4.71%). Babies born to primigravidae mothers (41, 8.49 %) were significantly more affected (P value - 0.0029) than multipara (16; 3.55%) mothers.

CONCLUSION: From our study, it is observed that dehydration, hypernatremia, and other related problems could be due to decreased breastfeeding & hot weather conditions. More care should be taken of LSCS mothers in post operative period to improve the breastfeeding. Primigravidae mothers are more prone due to lack of knowledge of correct feeding techniques for which antenatal and post-natal counselling regarding the same should be done at regular intervals to encourage exclusive breastfeeding.

LIMITATIONS:

- Some features like educational profile of mother, infant and maternal technical factors affecting breastfeeding were not observed in control group
- Normal vaginally delivered babies were discharged after 24 hours of life, hence home environment could not be evaluated
- Breast milk sodium levels were not done
- Number of cases studied were less as compared to other studies due to limitation of time and COVID - 19 pandemic

S. NO.	VARIABLE	MEAN	SD	MIN.	MAX.
1	MATERNAL AGE (YEARS)	30.24	3.37	23	38
2	NVD (%)		21.0 %		
3	MALE (%)		40.4 %		
4	PRIMI (%)		72.0 %		
5	BIRTH WT. (Gms)	3090.44	439.87	2225	4180
6	ADMISSION WEIGHT (Gms)	2709.89	395.90	1980	3720
7	WEIGHT LOSS (%)	12.32	1.9	9	17
8	AGE AT PRESENTATION (DAYS)	3.25	1.30	2	9
9	SERUM SODIUM (AT ADM.)	151.29	3.95	146	164
10	SERUM CREAT. (AT ADM.)	0.79	0.20	0.42	1.26
11	SERUM BUN (AT ADM.)	14.93	7.85	5	35.9
12	DURATION OF HOSPITAL STAY (DAYS)	3.32	0.77	2	5

MONTH	CASES	TOTAL DELIVERIES	%
Sep-20	4	92	4.35
Oct-20	4	107	3.73
Nov-20	6	94	6.38
Dec-20	7	94	7.44
Jan-21	7	100	7.00
Feb-21	4	81	4.94
Mar-21	4	79	5.06
Apr-21	6	49	12.24
May-21	4	34	11.76
Jun-21	2	46	4.35
Jul-21	6	58	10.34
Aug-21	3	100	3.00
Total	57	934	

SEASON	MONTH	CASES	TOTAL DELIVERIES	%
Autumn	Oct-Nov	10	201	5.00
Winter	Dec-Jan	14	194	7.20
Spring	Feb-Mar	8	160	5.00
Summer	Apr-Jun	12	129	9.30
Monsoon	July-Sep	13	250	5.20
Total		57	934	

	Newborn Age at adm	P-value	Wt. LOSS	P-value	Sr BUN at Adm	P-value
Sr Na At Adm	0.384**	0.003	0.311**	.019	.372**	.004