ORIGINAL RESEARCH PAPER

Paediatrics

CLINICAL PROFILE AND OUTCOME OF SICK CHILDREN ADMITTED WITH METABOLIC ACIDOSIS AT PICU

KEY WORDS:

Dr. Astha Trivedi Pediatrics Department, P.D.U. Medical College, Rajkot

Dr. Palak T. Hapani Pediatrics Department, P.D.U. Medical College, Rajkot

Dr. Mayank Rathod Pediatrics Department, P.D.U. Medical College, Rajkot

INTRODUCTION

- Metabolic acidosis is an acid base disorder characterised by decrease in serum pH that results from either a primary decrease in plasma bicarbonate(HCO3-) or an increase in hydrogen ion(H+) concentration.
- It is not a disease but rather a biochemical abnormality. The clinical manifestation of metabolic acidosis is no specific and its differential diagnosis includes common and rare diseases.

OBJECTIVE

- To study clinical profile of patients admitted in PICU with metabolic acidosis.
- To find out outcome in form of mortality rate in children admitted in PICU setup with metabolic acidosis and morbidity in survivors in form of duration of hospital stay.

Study Design

This is an observational study conducted at department of pediatrics at tertiary care hospital.

Inclusion Criteria:

1. All children admitted in PICU due to any clinical sickness having metabolic acidosis.
2. Pt between age group between 1 month to 12 year.

Exclusion Criteria :

1. patient with negative consent from parents/ guardians.

METHOD

75 children admitted in PICU were studied. Detailed history was taken and thorough physical examination was done. Arterial sample was taken for ABG analysis.Bedside ABG analysis was done by Abbott i-stat ABG machine.The outcome in form of mortality rate of children was calculated along with duration of PICU stay. The criteria for diagnosis metabolic acidosis are as follows

pH<7.35

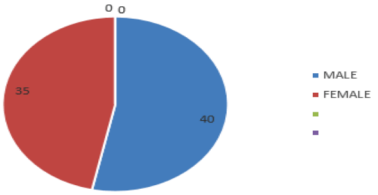
HCO3- <22

Clinical Presentation

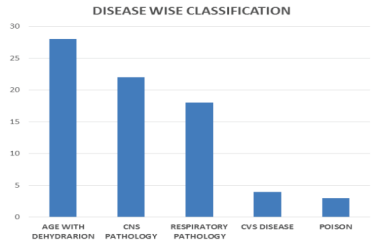
75 children admitted in PICU were studied with age in between 3 months to 8 years.

Out of which 40(54%) were male and 35(46%) were female.

AGE	MALE	FEMALE
<1 YEAR	10	4
1-5 YEAR	18	11
5-10 YEAR	12	20



- 28 patients- AGE with dehydration
- 22 patients- CNS diseases
- 18 patients- Respiratory diseases
- 4 patients- cardiovascular diseases
- 3 patients- envenomation/poison



PH	NUMBER OF PATIENT	HOSPITAL STAY
<7.0	24	14 DAYS (11-26 DAYS)
7.0-7.2	32	8 DAYS (4-15 DAYS)
7.2-7.35	19	3 DAYS (1-8 DAYS)

DISEASE WISE CLASSIFICATION	EXPIRY	DISCHARGE
AGE with dehydration	10	18
CNS diseases	3	19
Respiratory diseases	6	12
cardiovascular diseases	2	2
envenomation/poison	0	3

Out of 75 patients, 47 (63%) required ventilatory support. 21(28%) patients expired with metabolic acidosis.

CONCLUSION

- The frequency of metabolic acidosis is high in critically ill patients and is associated with increase duration of hospital stay and increase mortality rate.
- AGE with dehydration is most common cause of metabolic acidosis.
- Mortality and duration of hospital stay was more in severe metabolic acidosis.

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