RARE EYE MANIFESTATIONS IN HYPOKALEMIC PERIODIC PARALYSIS SECONDARY TO PROXIMAL RENAL TUBULAR ACIDOSIS

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INTRODUCTION

- Hypokalemic periodic paralysis is a documented manifestation in proximal renal tubular acidosis.
- Rarely periodic paralysis is associated with ocular manifestions.
- This case highlights the link between eye signs and periodic paralysis.

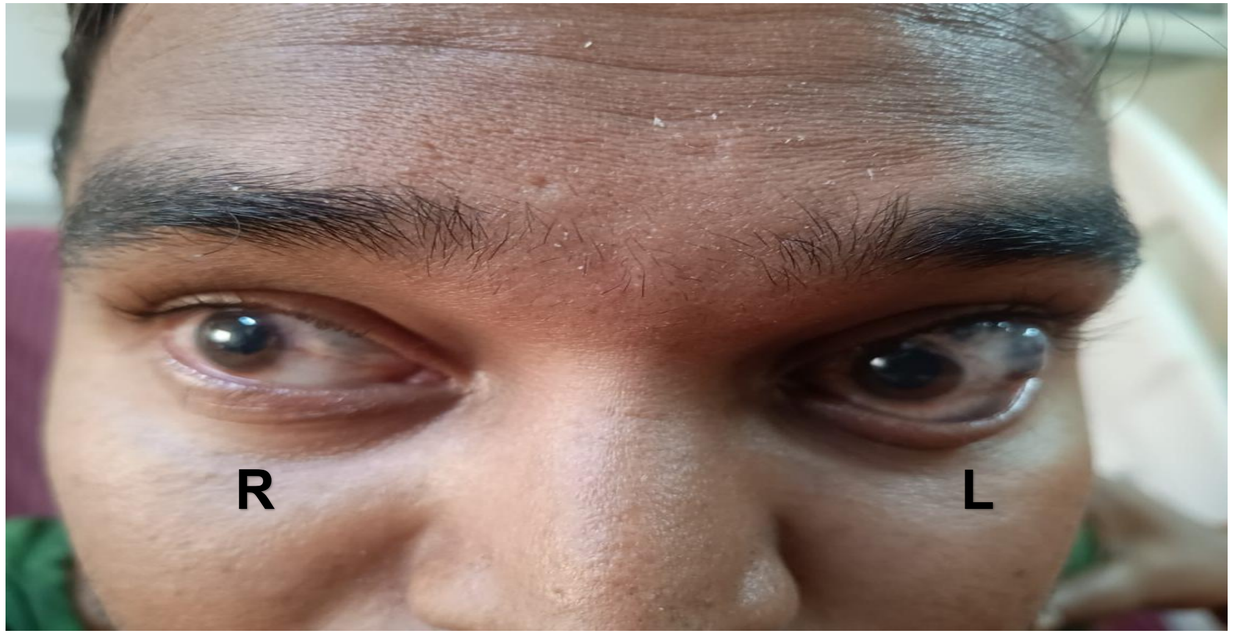
CASE REPORT

A 32 year old male presented with

- 1 day history of rapidly progressive quadriplegia.
- Intubated due to respiratory failure
- Serum potassium level was 1.4 mEq
- ABG showed metaboloic acidosis
- Weakness improved completely on correcting serum potassium levels.
- History of similar episode 12 years back and history of B/L blurring of vision since 3 years, insidious onset gradually progressive.
- Patient was diagnosed to have Glaucoma and lost to follow-up. In the current admission vision was negative for perception of light - B/L eyes
- Genetics showed SLC4A4 gene mutation

DISCUSSION

- SCLC 4A4 encodes for sodium bicarbonate cotransporter (NBC1). Mutation of the gene leads to renal and extra renal manifestation.
- Due to defective bicarbonate absporption at renal proximal tubules leads to proximal renal tubular acidosis and hypokalemic paralysis
- NBC1 also present in corneal epithelium, trabecular meshwork, ciliary and lens epithelium in which mutation causes band keratopathy, glaucoma and cataract
- the patient in discussion had B/L glaucoma ciliary staphyloma



Deep anterior chamber in both eyes due to open angle glaucoma and ciliary staphyloma in left eye

CONCLUSION

- Eye manifestations such as Glaucoma, band keartopathy and cataract are associated with channelopathies especially in SLC 4A4 gene mutation.
- One must be vigilant to look for this conditions when patients presents with periodic paralysis and manage them at the earliest for better quality of life.