Hypokalemic Hypochloremic Metabolic Alkalosis in Pyloric Stenosis: Do We Ever Really See It?

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**AIM & HYPOTHESIS**

In our observational experience, many patients do not demonstrate this classical lab triad. Hence, the aim of this study was to determine the incidence of classical lab values at presentation.

**METHODS**

- EMR of the Children’s Hospital of Wisconsin was queried in a retrospective fashion for patients having pyloromyotomy (either laparoscopic or open) for pyloric stenosis.
- Time period: start of EMR (Nov 2012) through the time point when this study was started (November 2015).
- Presenting data collected: K, Cl, HCO3.
- BUN and Cr were reported in 65% of the patients and so a BUN:Cr ratio was calculated with these data.

**RESULTS**

- 188 infants age 1.6 to 15.3 weeks underwent pyloromyotomy for pyloric stenosis during these 3 years
- The majority were males (86%)
- The average time from onset of symptoms to presentation, as reported by parents, was 10 days
- Only 10 patients (5%) were hypokalemic, 41 patients (22%) hypochloremic, and 37 patients (20%) alkalotic
- 7 patients (3.7%) presented with all three classical labs
- When compared to patients with normal labs, patients with hypokalemic, hypochloremic metabolic alkalosis at presentation had significantly higher BUN to creatinine ratios (45.2 v 32.0, p=0.028)

**DISCUSSION**

- <4% of patients with pyloric stenosis at our institution presented with hypoK, hypoCl metabolic alkalosis and 40% presented with normal labs
- Are patients diagnosed earlier than in the past because of US?
- Time from onset of symptoms to presentation is parent-reported, subjective, and highly variable
- Classic labs tended to have higher BUN:Cr ratios than those with normal labs
- Could a higher BUN:Cr ratio predict more severe metabolic derangements?

**REFERENCES**