**Title:** A Unique finding in Bartter’s Syndrome: A Case Report.

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**Background:** Bartter’s syndrome is a rare renal tubular disorder that is autosomal recessive in nature. Its incidence is 1.2 per million people. The pathophysiology of Bartter’s syndrome is due to the mutation in genes regulating the Na-K-2Cl co transporter (NKCC2) in the thick ascending loop of henle. It is characterized by salt wasting hypochloremia, hypokalemia, metabolic alkalosis, hyperreninemia and hyperaldosteronism with normal blood pressures. We will be presenting a case of Bartter’s syndrome with an unusual finding of a normal aldosterone level without metabolic alkalosis.

**Case presentation:** A 28-year-old caucasian male having chronic kidney disease (CKD) stage I with a past medical history of Bartter’s syndrome presented to our clinic with generalized abdominal pain, nausea and unable to tolerate oral potassium. He was first diagnosed with hypokalemia at the age of 2 with his lowest potassium level being 0.9mmol/l. In the emergency room (ER) his potassium level was 1.7, spot potassium to creatinine ratio was >1.5 and the bicarbonate was 23. There was no evidence of metabolic alkalosis in the setting of continuous vomiting. He had a high renin but normal aldosterone level. He was started on spironolactone 100 mg PO BID to prevent the loss of potassium via the renal outer medullary channels and ameloride to block the epithelial sodium channels. He was also given indomethacin 50 mg PO once daily. His presentation and lab readings are suggestive of either Bartter’s syndrome or Gitleman syndrome. The early onset of the disease (at age around 2 years), epidermal inclusion cysts, a long-standing history of potassium supplemental intake along with growth abnormalities and cachexia support a diagnosis of antenatal Bartter’s syndrome type 1. His normal aldosterone level is perplexing. This is a unique finding in contrast with the hyperaldosteronism seen in Bartter’s syndrome.

**Conclusion:** There is scant amount of literature describing a normal aldosterone level in Bartter’s syndrome. To the best of our knowledge there has been just one other case reported with a normal aldosterone reading in the setting of Bartter’s syndrome. The approach to such patients needs to be further explored.

**Conflict of interest:** Authors have no conflict of interest to declare.

**Key Words:** Bartter’s syndrome, Normal aldosterone, hyperaldosternism, hypokalemia, Chronic kidney disease.