McKittrick-Wheelock Syndrome: A Case Report and Review of Literature

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American College of Gastroenterology Annual Scientific Meeting, 10/24/2022, Charlotte, North Carolina

Introduction:

McKittrick-Wheelock syndrome is a rare condition caused by a giant rectal villous adenoma that secretes massive quantities of electrolyte-rich mucin.

It leads to severe hyponatremia, hypokalemia, dehydration, and renal failure.

We report a case of McKittrick-Wheelock syndrome caused by a 25 cm rectal adenoma, the largest lesion to date in medical literature.

Case Presentation:

A 75-year-old man with no past medical history was admitted to the hospital for 3 days of severe generalized weakness, near syncope, oliguria and worsening diarrhea.

The patient had had chronic diarrhea for the past 6 months, averaging 10 large, cloudy, whitish, mucous, non-bloody liquid stools daily. He had lost 20 lbs.

He was found to have severe hyponatremia (sodium 112), hypokalemia (potassium of 1.6), and acute renal failure (BUN 85, Cr 4.3).

The patient became hemodynamically unstable, requiring transfer to the ICU for vasopressors, aggressive intravenous fluid resuscitation, and electrolyte replacements.

He underwent a colonoscopy which showed a giant villous polyp in the rectum from the dentate line to 25 cm proximally. Biopsies showed villous adenoma. He was diagnosed with McKittrick-Wheelock syndrome.

The patient underwent a robotic abdomino-perineal resection with a permanent end colostomy. His diarrhea resolved. Renal failure resolved with normalization of sodium, potassium, BUN and Cr. Two years later, the patient has done well with no recurrence of symptoms.

Discussion:

In the medical literature, there are about 50 cases of McKittrick-Wheelock syndrome, caused by large villous adenomas ranging from 7 to 18 cm in size. Our case report describes a 25 cm adenoma, the largest lesion reported to date.

The postulated mechanism is that the villous adenoma releases prostaglandin E2, which is a secretagogue that leads to massive loss of sodium, potassium, and fluids.

Treatment consists of aggressive electrolyte and fluid replacement followed by surgical resection.