

# When the Potassium is Low, Should You Look For A Colon Mass?

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## ABSTRACT

- Mckittrick-Wheelock syndrome is an extremely rare condition that presents with severe electrolyte disturbances in the setting of distal colorectal tumors
- The tumors are most commonly villous adenomas located in the rectum
- High clinical suspicion is needed to diagnose and treat these tumors

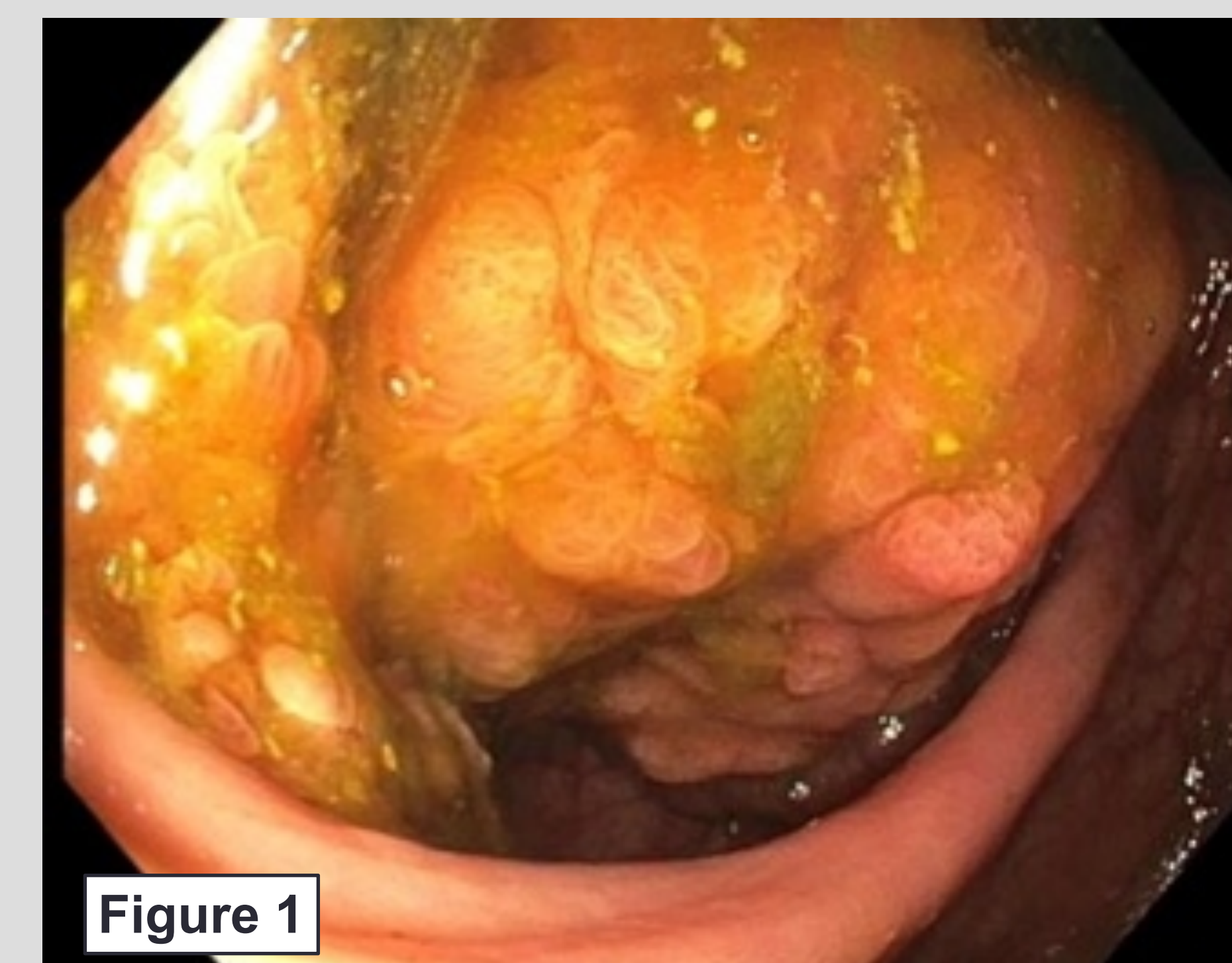
## INTRODUCTION

- Mckittrick-Wheelock syndrome is a rare condition that presents with severe electrolyte disturbances including severe hyponatremia, hypokalemia and renal failure in the setting of distal colorectal tumors
- The most common tumors are typically benign villous adenomas, and the most commonly reported site of involvement is the rectum
- Tumors are large and low in rectum making them difficult to remove endoscopically
- Diagnosis is clinical including laboratory tests, CT abdomen and pelvis with contrast and colonoscopy

## CASE REPORT

- **Presentation:** 64-year-old female presented with acute onset of altered mental status and diarrhea. Abdominal tenderness diffusely and she appeared ill
- **Pertinent Labs:**
  - WBC 25.7 K/MM<sup>3</sup>, Hemoglobin 16.7 g/dL, MCV of 75 fL, platelets 406 K/ MM<sup>3</sup>
  - Sodium 121 mmol/L, potassium 2.0 mmol/L, Chloride 108 mmol/L, bicarbonate 7 mmol/L, serum creatinine 12.12 mg/dL, BUN 173 mg/dL, calcium 8.3 mg/dl, albumin 4.0 g/dL, protein 7.4 g/dL
- **Imaging:** CT abdomen and pelvis without contrast showed a 8.5 x 6.1 cm fungating rectal mass approximately 7 cm from the anal verge
- **Procedures:** Flexible sigmoidoscopy showed a large polypoid rectal mass approximately two-thirds of the circumference of the proximal rectum. The rectal mass could not be resected endoscopically
- **Pathology:** Large, villous adenoma with focal high-grade dysplasia, no invasion, thirteen benign lymph nodes, and margins negative for dysplasia
- **Surgical Evaluation:** She then underwent laparoscopic hand-assisted low anterior resection with colorectal anastomosis
- **Outcome:** She temporarily required hemodialysis for acute on chronic renal failure. But her renal function improved after the resection of the adenoma.

## IMAGES



Figures 1 and 2.  
Flexible Sigmoidoscopy demonstrates a large polypoid rectal mass encompassing approximately two-thirds of the circumference of the proximal rectum

## DISCUSSION

- Mckittrick-Wheelock syndrome is a rare presentation of large villous adenomas or adenocarcinomas most commonly seen in the rectum
- It presents as secretory diarrhea, acute renal failure, hyponatremia, hypokalemia and hypoproteinemia
- Prognosis is good if renal function can be recovered quickly and if the tumor is resected. However there is typically a delay in diagnosis due to its rarity