**INTRODUCTION:** Systemic amyloidosis causes abnormal deposits of amyloid protein and has various manifestations involving many organ systems. We report a case of systemic amyloidosis that initially presented with chronic diarrhea.

**CASE:** A 64-year-old woman presented with watery diarrhea and fatigue for one month and an eleven-pound weight loss over one week. Even though she visited outside clinics and underwent colonoscopy, only nonspecific findings including fragility of the colonic mucosa were found. Because her symptoms persisted, she was referred to our hospital for further evaluation and treatment.

On physical examination, she appeared mildly distressed and her vital signs were a temperature of 36.7°C, blood pressure 84/58 mmHg, pulse 96 beats per minute, respiratory rate 18 per minute, and pulse oximetry 100% in ambient air. Laboratory studies were remarkable for hemoglobin of 7.9 g/dL, potassium 2.7 mEq/L, total protein 4.8 g/dL, albumin 2.7 g/dL and troponin 1.9 ng/mL. Her electrocardiogram (ECG) revealed low voltage, but no ST-T wave changes. Echocardiography revealed left ventricular hypertrophy with normal ejection fraction. Biopsy via colonoscopy showed plasma cell accumulation and amyloid deposits in the colonic mucosa, and bone marrow biopsy revealed abnormal plasma cell deposition. Thus, we diagnosed systemic amyloidosis secondary to multiple myeloma.

**DISCUSSION:** In the case of persistent diarrhea, it may be difficult to determine the underlying disease because the differential diagnosis is broad. In our patient, the colon biopsy confirmed gastrointestinal amyloidosis. Suspect systemic amyloidosis in a patient presenting with chronic diarrhea and cardiac hypertrophy in the setting of an elevated troponin I and low voltage on ECG.