Fecal Incontinence due to Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy (CADASIL)

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Introduction

- Fecal incontinence, which is the accidental passing of solid or liquid stool, significantly impairs quality of life
- Occurs in up to 15% of the Western population
- Common causes: structural damage to the anal sphincter, fecal impaction, rectal prolapse, or neurological impairment
- Cerebral Autosomal Dominant Arteriopathy with Subcortical Infarcts and Leukoencephalopathy (CADASIL) is a rare hereditary neurological disorder of the cerebral vessels that causes recurrent ischemic strokes and progressive loss of cognitive function
- Here we present a case of fecal incontinence caused by CADASIL

Case Description

- A 66-year old Caucasian male with a 15-year history of CADASIL presented to clinic for evaluation of fecal incontinence
- Symptoms began 18 months earlier, improving over the next 12 months
- Recurred 6 months prior to presentation with urinary incontinence and persistent worsening of symptoms
- Patient denied abdominal pain, unintentional weight loss, rectal bleeding, history of rectal trauma, or anorectal manometry, and was up to date on screening colonoscopy
- Digital rectal exam revealed normal resting tone and diminished sphincter squeeze with no evidence or mass, rectal prolapse, nor hemorrhoids
- Prior imaging showed severe small vessel ischemic changes in his brain with multiple infarcts but no spinal cord compression
- It was concluded that the patient's incontinence was due to recurrent strokes secondary to CADASIL

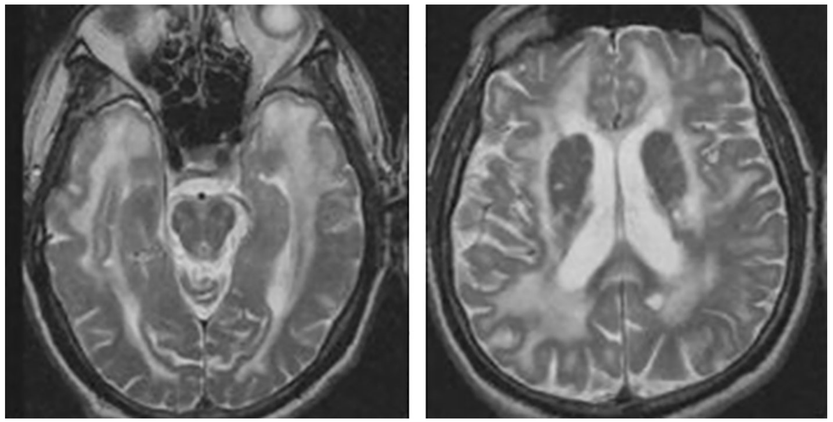

Figure 1. MRI of the brain reveals presence of leukoencephalopathy in the anterior temporal lobes (left) and the external capsule (right). Image obtained from Locatelli et al. 2020 (DOI: 10.3389/fpharm.2020.00321).

Discussion

- Fecal incontinence occurs in up to 40% of patients immediately after stroke, a defining characteristic of CADASIL
- Literature has found that 72% of CADASIL patients experience fecal incontinence at time of death
- Multiple cortical regions of the brain play a role in controlling the anal sphincter, suggesting redundancy of function – this may explain why the presence of persistent fecal incontinence can be a marker of late-stage CADASIL
- Treatment strategies for fecal incontinence include hygiene and skin protection, regulation of stool consistency, and pelvic floor physical therapy
- Our case highlights the significance of clinical recognition of a rare disease as a potential cause of a common symptom