The Role of History and Physical Examination in Colovaginal Fistula Diagnosis: A Case Report

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BACKGROUND

- Colovaginal fistula often presents subtly but can be diagnosed through careful history and physical examination making it a key condition for clinicians to recognize in older adults with a previous hysterectomy. Because primary care physicians are often the first point of contact for patients noticing potentially embarrassing symptoms, they can make an early diagnosis leading to improved quality of life.
- A fistula is a connection between two epithelialized surfaces that is abnormal. In the case of colovaginal fistula, an abnormal communication between the colon and vagina exists allowing fecal matter and flatus to pass from the high-pressure bacteria-rich environment of the colon into the low-pressure environment of the vaginal canal.
- While colovaginal fistulas remain extremely rare, they are the third most common lower reproductive tract fistulas in women. During 1979-2006, the rate of colovaginal fistula was measured by looking at the rate of colovaginal fistula repairs. The rate was found to be 0.6 repairs per 100,000 women per year.
- The symptoms of colovaginal fistula are severe and warrant early detection and intervention. In this case, the patient underwent surgery within 2 weeks of initial diagnosis.

OBJECTIVES

- Emphasize the utility of history/physical examination for diagnosing rare conditions.
- Demonstrate how a clinical diagnosis can lead to multidisciplinary management.

CLASSIFICATION

STAGE	DESCRIPTION
0	Mild clinical diverticulitis
Ia	Pericolonic abscess or phlegmon, no fluid collection
Ib	Pericolonic abscess less than 4 centimeters
II	Pelvic, intraabdominal, or retroperitoneal abscess, or greater than 4 centimeters
III	Purulent peritonitis
IV	Fecal peritonitis

Table 1: The Hinchey Classification is used to stage complicated diverticulitis which is relevant in the case of colovaginal fistula as recurrent or inadequately healed diverticulitis can cause erosion leading to colovaginal fistula. The patient, in this case, was experiencing diverticular disease as demonstrated both on CT and colonoscopy and would be an example of Hinchey Class IV.

CASE PRESENTIATON

- A 79-year-old woman with a past medical history of Cesarean-section and hysterectomy presented to her primary care physician with a sensation of fluid in the abdomen, foul-smelling discharge, and vaginal flatus persisting for several weeks.
- **PHYSICAL EXAMINATION**
  - Vital signs within normal limits
  - Abdominal exam: lower midline incision scar, soft doughy abdomen
  - Pelvic exam: foul-smelling purulent discharge
- **CT RESULTS 1 MONTH PRIOR**
  - CT of the abdomen and pelvis showed colonic wall thickening particularly in the pelvis close to the vaginal vault
- **COLONOSCOPY**
  - Severe kink that could not be crossed in the sigmoid colon, diverticular disease
- The patient was referred to a general surgeon for low anterior resection (LAR) of colovaginal fistulous connection and primary colon anastomosis between segments of healthy colon.
- The patient was noted to have widespread pelvic adhesions and scarring. The opening in the vagina due to the fistula was left to close naturally. The patient was discharged on post-op day 3 with no complications.
- Three-months post-op, the patient reported no vaginal discharge. The incisions healed well with no signs of infection.

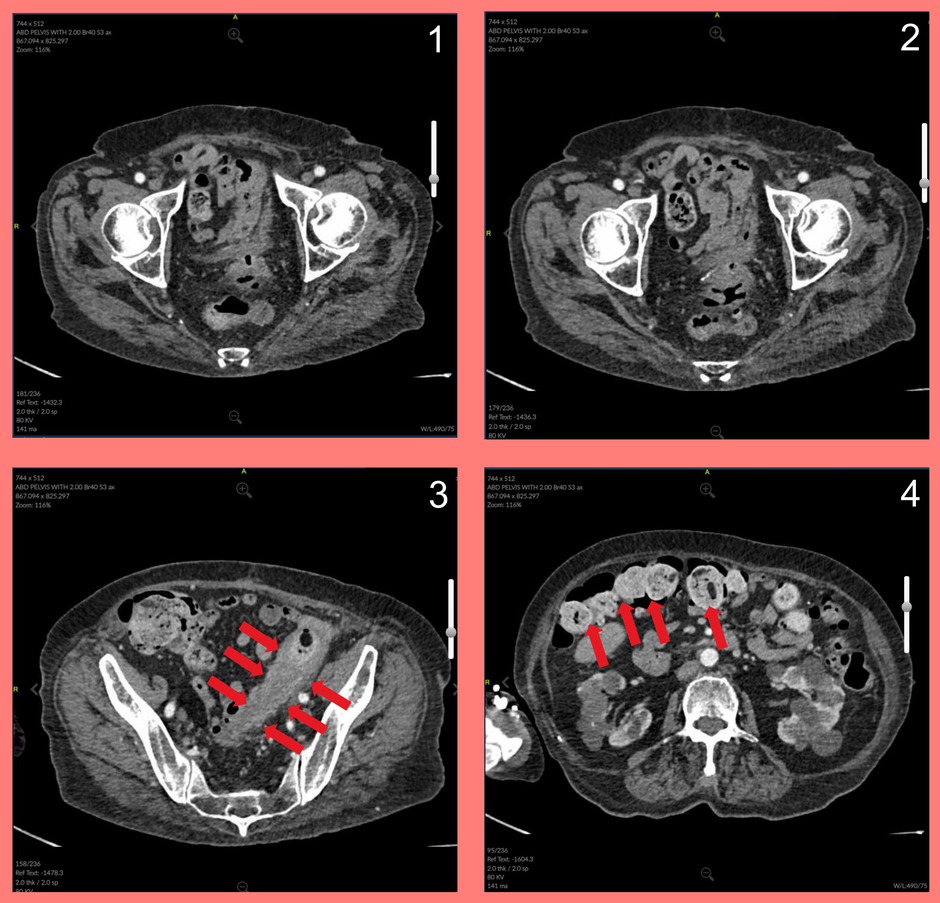

Figure 1: CT of air in the vagina which is considered a normal finding since it is an open environment
Figure 2: A second view of the CT showing air in the vagina, the fistula cannot be directly visualized on CT images
Figure 3: CT demonstrating colonic wall thickening indicated by red arrows
Figure 4: CT demonstrating severe stool burden indicated by red arrows

RESULTS

- **PATHOLOGY**
  - Colon portion of colovaginal fistula – severe acute on chronic diverticulitis with stricture, perforation, and fibrinous serositis with adhesions consistent with clinical history of colovaginal fistula negative for dysplasia or malignancy
  - Anastamotic donuts – benign viable colonic mucosa negative for dysplasia or malignancy
- **MICROBIOLOGY**
  - Detection of only normal vaginal flora
  - Negative for *G. vaginalis*, *T. vaginalis*, *N. gonorrhoeae*, *C. trachomatis*, *C. albincans*

CONCLUSION

- Past medical history and comorbid conditions that are often associated with colovaginal fistula such as diverticular disease, previous hysterectomy, inflammatory bowel disease, pelvic trauma, or pelvic radiation should give rise for suspicion of colovaginal fistula when combined with symptoms of vaginal flatus, malodorous discharge, or fecaluria.
- Colovaginal fistula can present with non-specific symptoms that can be diagnosed through history and physical examination leading to early intervention. Primary care physicians play a critical role in early diagnosis leading to successful repair and quality of life even for a patient with advanced development of adhesions.

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