Ulcerative colitis in a neovagina

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Abstract

We report a case of ulcerative colitis developing in a colonic transposition used for creation of a neovagina in a patient with congenital Muellerian agenesis. The onset of vaginal disease preceded the development of colonic disease and was more resistant to treatment compared to the colon disease failing multiple escalating therapies. Patient is currently in remission on biologic therapy.

Keywords

Ulcerative colitis, Neovagina, Vaginoplasty

1 Introduction

Vaginal agenesis occurs about 1: 4000 to 1:10000 females, the most common cause is congenital absence of the uterus and vagina which is also referred to as Muellerian agenesis [1]. The first line approach to treatment is usually non-surgical using successive dilation, with surgery reserved for patients failing or refusing dilation [2], available surgical options include creation of neovagina using skin graft or utilizing bowel segments for creation of a neovagina, the most commonly utilized bowel segment is the sigmoid colon [1, 3], peritoneum, bladder mucosa, amnios grafts have also been used for creation of a neovagina in pediatric patients [4]. Bowel segments used to construct neovagina provide the advantage of a cosmetic, self-lubricating vagina without the need for prolonged vaginal dilation, long term functional results are usually favorable [5, 6].

2 Case report

We report a case of 29 year old female with history of congenital Muellerian agenesis with agenesis vagina and lower uterine segments. At age 16 the patient underwent construction of neovagina using colonic transposition. Transverse colon was used because of technical reasons intra-operatively. Following surgery patient did well with good functional outcome, however, at age of 25 she started having vaginal bleeding. She was evaluated by her gynecologist and found to have inflammation in the neovagina. No specific diagnosis was given the patient but she was treated with antibiotics without improvement in the symptoms. Three years later patient started noticing rectal bleeding, at that time she was evaluated by a gastroenterologist who performed colonoscopy and endoscopy of the neovagina (see Figure 1). Severe colitis was
present in the neo-vagina and moderate colitis in the left colon on histopathology (see Figure 2). The right colon was normal.

Her colonic disease was easily controlled with mesalamine enemas, however, her vaginal disease didn’t respond to mesalamine enemas or suppositories, hydrocortisone enemas, oral corticosteroids or 6-mercaptopurine. Following that infliximab infusions were initiated and since then the patient’s colitis and neovaginal inflammation is in remission and the patient is asymptomatic.

![Figure 1. UC in the neovagina (left) and in the colon (right).](image1)

![Figure 2. Histopathology demonstrating active colitis in the neovagina (left) and distal colon (right).](image2)

### 3 Discussion

Diseases of the colonic mucosa continue to happen in the neovagina following reconstruction, adenocarcinoma of the colonic mucosa has been reported in the neovagina [7, 8], several case reports have reported ulcerative colitis in both the colon and the neovagina after neovagina creation for persistent cloaca, gender reassignment, reconstruction following surgical excision of vagina and androgen insensitivity syndrome [9-12].

Management of ulcerative colitis in the neovagina is challenging since oral 5-Aminosalicylates exert their effect locally rather systemically and thus won’t be effective for vaginal disease, topical 5-Aminosalicylates are an option but the
The absence of a sphincter in the vagina makes their retention difficult, our patient responded well to biologic therapy. This case also highlights the contribution of local factors in the pathophysiology and disease activity of ulcerative colitis in the susceptible patient, including the gut and neovaginal microbiome.

References