Sigmoidorectal Intussusception Presenting as Prolapse Per Anus in an Adult

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Abstract

Adult intussusception is a rare entity with enteric intussusception more common than colonic intussusception. While benign lesions account for most of the enteric intussusception, malignancy is the most common cause of colonic intussusception in adults. Intussusception presenting as mass per rectum has been reported in children and is most commonly due to ileocolic intussusception. Usually adult colonic intussusceptions are managed with resection without reduction due to fear of spillage or dissemination of malignant cells. But coloanal intussusception is an exception where reduction should be attempted initially to preserve sphincter. Though few cases of coloanal intussusception are reported in adults, sigmoidorectal intussusception due to sigmoid colon carcinoma presenting as prolapse per anus is very rare and management remains a challenge.

KEYWORDS: Intussusception in adults, Sigmoid colon malignancy, Sigmoidorectal intussusception, Prolapse per anus
SIGMOIDORECTAL INTUSSUSCEPTION PRESENTING AS PROLAPSE PER ANUS IN AN ADULT

INTRODUCTION

Intussusception occurs when one loop of bowel (Intussusceptum) telescopes into adjacent segment (Intussuscipiens) of gastrointestinal tract. It is rare in adults with an incidence of 0.1-0.2/lakh per annum (1). Most of the adult colonic intussusceptions have a leading point with malignancy leading the cause. Colocolic and colorectal intussusception is reported but colonic intussusception presenting as prolapse per anus is very rare. Though sigmoidorectal intussusception resulting in prolapse per anus due to adenoma of sigmoid colon is reported, we were unable to find any report of prolapse per anus due to sigmoidorectal intussusception secondary to sigmoid colon carcinoma in an online survey. Adult colocolic intussusception should be managed with resection without reduction. But coloanal intussusceptions should be given an attempt to reduce before resection with an intention to save anal sphincter (2). Here we report a case of sigmoidorectal intussusception which presented as prolapse per anus with sigmoid colon malignant growth as the lead point and was managed successfully by reduction, resection and primary colorectal anastomosis.

CASE REPORT

A 73 years old male was admitted in our department with complaint of mass coming out of anus since 3 days. Patient had no other symptoms and was passing stool once a day. Patient had not attempted to reduce the mass manually. On examination abdomen was soft, no distension and no tenderness in any of the quadrants and there was no palpable mass. There was no evidence of free fluid and bowel sounds was normal. Per rectally around 7 cm segment of bowel was seen outside the anus with a nodular growth at the apex (Figure 1). Initial diagnosis of rectal prolapse due to rectal carcinoma was made. X-ray abdomen revealed no obstruction. Ultrasonography (USG) of abdomen revealed ‘Target Sign’ of bowel within bowel appearance indicating sigmoidorectal intussusception. Tissue biopsy for histopathological examination (HPE) was taken from the nodular growth over the prolapsed bowel segment. Mass was not attempted for reduction and computerized tomographic (CT) scan was performed. CT revealed bowel within bowel appearance in rectum with protrusion of part of sigmoid colon and its mesocolon as a leading part in rectum (Figures 2,). No other significant findings were observed in CT. Carcinoembryonic antigen level was 4.5 ng/ml. Histopathologic evaluation (HPE) revealed moderately differentiated adenocarcinoma of colon. So the case was diagnosed to be sigmoidorectal
intussusception with Sigmoid colon malignant growth as the leading point. Patient was posted for surgery with a plan of per-operative reduction and anterior resection with an intention to save the anal sphincter and if reduction is not possible, to go ahead with abdominoperineal resection. Bowel preparation was not given. At laparatomy sigmoidorectal intussusception was confirmed and one of the assistant tried to reduce the mass from below. Fortunately the mass could be reduced from outside easily and internally mass was reduced completely by milking gently from distal rectum towards proximally (Figures 3, 4). Limited resection with a margin of 10 cm on both sides and primary colorectal anastomosis was done. Patient recovered well post-operatively without any complications. HPE revealed moderately differentiated carcinoma of sigmoid colon with invasion into muscularis propria with no metastasis in the dissected 8 lymph nodes (Figure 5). Final staging was T2N0M0. Patient was discharged without need for Chemotherapy. Colonoscopy at 3 months revealed normal study.

**DISCUSSION**

Adult intussusception is a rare entity with many surgeons encountering only one or two cases throughout their career with most of them diagnosed at laparatomy. Reported incidence in adults is 2 to 3 cases in a population of 1000000 per annum (1). It represents approximately 1% of intestinal obstruction cases in adults (3). An underlying pathological lead point is found in 90% of adult patients unlike in childhood which is most commonly idiopathic. Majority of adult intussusception are enteric or ileocolic variety with one third of adult intussusception being colocolic or colorectal in nature (4). Majority of colocolic intussusceptions are secondary to malignancy (5). Benign lesions like polypoid adenoma represent the second most common cause (6).

Presenting symptoms in adults are non-specific. Pain is the commonest symptom being seen in 71-90% of patients, with vomiting and bleeding per rectum as next common symptoms (7). Cases of coloanal intussusception in adults where the invaginated colon is felt by per rectal digital examination in the anal canal has been reported, but colonic intussusception with malignant growth as lead point protruding outside the anal verge is very rare (2).

Diagnosis of intussusception in adults is aided by USG, CT and magnetic resonance imaging (MRI). USG reveals ‘Target Sign’ of bowel within bowel appearance on transverse view and ‘Pseudo Kidney sign’ in longitudinal view. CT is considered the imaging modality of choice for adult intussusceptions (8). CT shows ‘Target Sign’ and ‘Layered appearance’ on cross sections in delayed phase and sausage shaped mass on longitudinal view. CT also
provides information for staging in intussusception due to malignancy. Though MRI has been used in some series, is not much beneficial than CT.

The appropriate management of adult intussusception is not always clear cut. Azar et al. suggested surgical resection without reduction for adult intussusception because almost 50% of enteric and colonic intussusceptions are due to malignancy (3). Most surgeons agree for primary resection without a prior attempt at reduction as the treatment of choice for colocolic adult intussusception to avoid spillage or dissemination of malignant cells during reduction. But in coloanal or sigmoidorectal intussusception without any evidence of disease in lower rectum an initial reduction could lead to sphincter saving operation as compared with abdominoperineal resection (2). However some cases may need perineal approach when the reduction is not possible.

CONCLUSIONS

Colonic intussusception can present as prolapse per anus in an adult and should be investigated before definitive management. CT is the investigation of choice. Though resection without reduction is the surgical choice for most of the colocolic intussusception in adults, coloanal and sigmoidorectal intussusception is an exception where initial reduction if possible benefits the patient with sphincter saving surgery without the need for abdominoperineal resection.

REFERENCES


FIGURE LEGENDS

FIGURE 1. Prolapse per anus due to sigmoidorectal intussusception with malignant growth at the apex

FIGURE 2. CT scan showing sigmoidorectal intussusception
FIGURE 3. Per operative reduction of sigmoidorectal intussusception

FIGURE 4. After complete reduction of intussusception
FIGURE 5. HPE showing moderately differentiated adenocarcinoma with invasion into muscularis propria.