Jejunojejunal Intussusception Caused by a Jejunal Villous Adenoma Polyp in an Adult

Seyed Mohammad Hossein Kashfi 1; Faegheh Behboudi Farahbakhsh 1; Mina Golmohammadi 1; Ehsan Nazemalhosseini Mojarad 2; Pedram Azimzadeh 2; Shahrokh Iravani 3; Hamid Asadzadeh Aghdaei 1, 7; Katayoun Gohari Moghaddam 3; Mohammadreza Zali 2

1 Basic and Molecular Epidemiology of Gastroenterology Disorders Research Center, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran
2 Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran
3 Aja Cancer Research Center (ACRC), Aja University of Medical Sciences, Tehran, IR Iran

*Corresponding author: Hamid Asadzadeh Aghdaei, Basic and Molecular Epidemiology of Gastrointestinal Disorders Research Center, Shahid Beheshti University of Medical Sciences, Tehran, IR Iran. Tel: +98-22432515, E-mail: hamid.asadzadeh@gmail.com

Received: November 17, 2014; Revised: November 30, 2014; Accepted: December 15, 2014

1. Introduction

Intussusception is telescoping or invagination of one part of the intestine (intussusception) into an adjacent section (intussuscipiens) and it may present as a life threatening condition. Intussusception is so rare in adults and small intestine intussusception in adults is usually due to benign entity; whereas in large intestine, malignant neoplasms can be the etiology. Here, we reported a rare case of adult jejunojejunal intussusception due to a jejunal villous adenoma polyp in an Iranian female patient.

2. Case Presentation

A 33-year female Iranian patient referred to the emergency department of Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences with acute abdominal pain, nausea and constipation. The patient did not have a history of IBD, FAP or HNPCC. However, she had been referred to the Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran due to abdominal pain three years ago and multiple polyps in stomach were detected. Plain abdominal CT scan showed a mass suggesting intussusception in the jejunum. Balloon association enteroscopy showed two 10 mm and 40 mm polyps in jejunum. The polyp was a villous adenoma confirmed by pathology. Exploratory laparotomy revealed jejunojejunal intussusceptions and exploratory laparotomy with jejunoileal anastomosis was performed.

Keywords: Intussusception; Surgery; Villous; Tomography

Copyright © 2015, Colorectal Research Center and Health Policy Research Center of Shiraz University of Medical Sciences. This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/) which permits copy and redistribute the material just in noncommercial usages, provided the original work is properly cited.
Intussusception is characterized by navigation of a part of gastrointestinal tract into an adjacent section (6). Intussusception is so rare in adults and small intestine intussusception in adults is usually due to benign entity; whereas, in large intestine malignant neoplasms should be considered (3). Jejunojejunal intussusception in adults is a rare entity and the incidence of intussusception in jejunum is higher than ileum. In this case report, we presented a rare case of jejunojejunal intussusception caused by a jejunal villous adenoma polyp in a 33-year-old Iranian female. Of all small intestinal adenoma lesions, up to 20% occur in the small intestine (7). Among adenoma polyps, villous adenoma with its invasive histological features has the highest risk of progression to cancer than other adenomas (8). In line with our study, Takeuchi et al. reported a rare case of a 73-year-old male with tubulovillous adenocarcinoma presenting with intussusception. The patient complained with vomiting, nausea and abdominal distension. Plain abdominal CT scan revealed a mass suggesting intussusception in the jejunum. Axial spiral Modified Card Sorting Test (MCST) of thorax, abdomen and pelvis with intravenous and oral contrast had normal findings. Balloon association enteroscopy showed two 10 mm and 40 mm polyps in jejunum. After injection, larger polyps were excised and retrieved. The pathological diagnosis of polyp was villous adenoma with mild grade dysplasia (Figure 1). Tumor invaded to muscularis propria PT2. Immunohistochemistry (IHC) had positive results for chromogranin, patchy for Epithelial Membrane Antigen (EMA), Carcinoembryonic Antigen (CEA) and 2-3% Ki67 and negative for neuron-specific enolase (NSE) and synaptophysin in tumor cells. Exploratory laparotomy revealed jejunojejunal intussusceptions and exploratory laparotomy with jejunoileal anastomosis was performed. Further follow-up of patients had good clinical results.

**3. Discussion**

Intussusception is characterized by navigation of a part of gastrointestinal tract into an adjacent section (6). Intussusception is so rare in adults and small intestine intussusception in adults is usually due to benign entity; whereas, in large intestine malignant neoplasms should be considered (3). Jejunojejunal intussusception in adults is a rare entity and the incidence of intussusception in jejunum is higher than ileum. In this case report, we presented a rare case of jejunojejunal intussusception caused by a jejunal villous adenoma polyp in a 33-year-old Iranian female. Of all small intestinal adenoma lesions, up to 20% occur in the small intestine (7). Among adenoma polyps, villous adenoma with its invasive histological features has the highest risk of progression to cancer than other adenomas (8). In line with our study, Takeuchi et al. reported a rare case of a 73-year-old male with tubulovillous adenocarcinoma presenting with intussusception. The patient complained with vomiting, nausea and abdominal distension. Plain abdominal CT scan revealed intussusception in the jejunum. Surgery was performed and a jejunal tumor of about 30 cm from the Treitz ligament was detected (9). In another study, Neishaboori et al. reported a 40-year-old Iranian female with jejunal intussusception caused by a huge inflammatory fibroid polyp (Vanek’s tumor). The patient presented with severe, postprandial abdominal pain followed by projectile vomiting over three days. In consistent to our study, they performed laparotomy and observed an 18 cm tumor from the distal jejunum causing jejunojejunal intussusceptions. The intussuscepted segment was resected and end-to-end anastomosis was performed (10). Basu et al. reported a case with jejunojejunal intussusception caused by a jejunal Gastrointestinal Stromal Tumor (GIST). In their study, a 46-year-old female presented with abdominal pain, anorexia, mild abdominal distension, constipation and vomiting. As a surgical treatment they performed formal midline laparotomy and found a 10-cm long jejunojejunal intussusception 60 cm distal to the duodenojejunal junction without perilesional adenopathy (11). There is still a diagnosis challenge in Intussusception cases since they usually have nonspecific symptoms and no specific clinical presentations. These unspecific symptoms often lead to a late diagnosis. Imaging technics including ultrasonography and CT are considered as best modalities (12, 13). Even with the help of these advanced imaging technics, most cases of intussusception are diagnosed on the surgical operation procedures. The treatment of intussusception in adult cases is surgical operation. Recently, laparoscopic procedure has been demonstrated as a minimally invasive technique in adult cases. As in this case, we performed exploratory laparotomy with jejunoileal anastomosis. Martis et al. reported a rare case of jejunojejunal intussusception caused by GIST in a 50-year-old female presenting with abdominal pain, nausea and vomiting (14). In the present case report, the patient referred with extreme abdominal pain and diarrhea. This is similar to Martis et al. report (14). However, in most cases these unspecific presentations and symptoms usually result in a late diagnosis. In another case report, Choi et al. reported a 36-year-old female with Peutz-Jeghers syndrome (PJS) with a large jejunal polyp presenting as an asymptomatic small bowel intussusception identified on CT. In that case, they performed Double Balloon Enteroscopy (DBE) to remove the lesions. In contrast to our study, pathologic feature of polyps they detected was hamartomatous (15). In a case report, Singhal reported a 51-year-old adult with jejunoileal intussusception caused by an Inflammatory Fibroid Polyp (JFP). In double contrast CT scan, they found a mass of jejunoileal intussusception. Consistent to our study, they performed laparotomy and observed a jejunoileal intussusception of about 14 cm length involving the distal jejunum and proximal ileum (16). In conclusion, adult intussusception caused by villous adenoma is extremely rare. Since it has nonspecific symptoms, this might result in a late diagnosis. Therefore, imaging modalities includ-
ing CT scan play a significant role in diagnosis. Surgical operation is the best treatment in adult intussusception with best results.

Authors’ Contributions

Seyed Mohammad Hossein Kashfi: writing the manuscript; Faegheh Behboudi Farahbakhsh: sectioning the specimen and collecting the data; Ehsan Nazemalhosseini Mojarad: Revising the manuscript; Pedram Azimzadeh: Revising the manuscript; Shahrokh Iravani: follow-up of patient; Katayoun Gohari Moghadam: Pathology diagnosis of the specimen; Mohammad Reza Zali: Diagnosis of intussusception in this case; Hamid Asadzadeh Aghdai: gave the idea of reporting this case report.

Funding/Support

This study was supported by the Gastroenterology and Liver Diseases Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

References