Asian Journal of Research in Surgery

6(1): 1-7, 2021; Article no.AJRS.69168

Case Report: Multiple Polyposis

Winandar, Tegoeh[1*] and Suwardi[2]

[1]Medical Faculty, Sebelas Maret University, Surakarta, Indonesia.
[2]Department of Pediatric Surgery, Dr. Moewardi General Hospital, Surakarta, Indonesia.

Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

Editor(s):
(1) Prof. Wagih Mommtaz Ghannam, Mansoura University, Egypt.
(2) Dr. Ramesh Gurunathan, Sunway Medical Center, Malaysia.
Reviewers:
(1) Zhensheng Wang, Emory University, USA.
(2) Paul David Glenn II, McGill University, Canada.
Complete Peer review History: http://www.sdiarticle4.com/review-history/69168

Case Study

Received 06 April 2021
Accepted 10 June 2021
Published 18 June 2021

ABSTRACT

Introduction: Hereditary gastrointestinal polyposis syndrome occurs in about 1% of all cases of colorectal cancer and is associated with a broad spectrum of extracolon tumors. FAP is the most common polyposis syndrome with a prevalence of 1 per 10,000 births and accounts for around 0.5 - 1% of all cases of colorectal cancer. Symptoms rarely occur in children and adolescents until large and numerous adenomas cause rectal bleeding or even anemia. Colonoscopy screening with timely treatment of the identified lesions has led to a 55% reduction in CRC as the first sign that the patient is affected by FAP.

Case Description: A 17-year-old male patient presents with a bloody stool in the last 1 month ago. The patient had a history of intestinal tumor surgery 3 years ago. The physical examination indicated no abnormalities. Colonoscopy and other examinations showed multiple polyposis. The patient underwent a total colectomy with ileal-endorectal pull through. The patient requires lifelong surveillance due to a higher risk of rectal cancer associated with FAP and the preservation of their rectum.

Keywords: Polyp Recti; multiple polyposis; colectomy.

**Corresponding author: E-mail: tegoehsurgery1@gmail.com, tegoehsurgery@gmail.com, tegoehbedah@gmail.com;*

1. INTRODUCTION

'Polyp' is a mass that protrudes into the lumen of the gastrointestinal tract, urinary tract, urinary tract, or respiratory tract that usually arises from the mucosal lining [1], the hereditary colorectal cancer (CRC) syndrome associated with polyposis in the colon can be divided into familial adenomatous polyposis [FAP], attenuated familial adenomatous polyposis, and polyposis MYH, and those not associated with colon polyposis (hereditary nonpolyposis) of colon cancer [2]. Familial adenomatous polyposis is an autosomal dominant disease that is usually characterized by the growth of hundreds or thousands of adenoma polyps on the mucosa of the rectum and colon during the second decade and mutations in the APC gene on the long arm of chromosome 5 [3,4].

Hereditary gastrointestinal polyposis syndrome accounts for about 1% of all cases of colorectal cancer and is associated with a broad spectrum of extracolon tumors [1]. Adenomatous polyps appear in 15% of FAP at 10 years, 50% at 15 years, and 75% at 20 years[2]. FAP is the most common polyposis syndrome, with a prevalence of 1 per 10,000 births, and accounts for about 0.5% -1% of all cases of colorectal cancer [5].

Colorectal cancer will subsequently develop in nearly 100% of FAP patients in the third or fourth decade of life if not treated [5]. In 20 to 30% of cases, the condition is caused by a spontaneous mutation without clinical or genetic evidence of FAP in the parent or family. Early colonic manifestations of FAP occur predominantly in early adolescence, and CRC is extremely rare before the age of 20 years in FAP [6].

The disease is detected, generally, in the symptomatic phase due to the presence of blood in the stool [7]. Symptoms rarely occur in children and adolescents until the adenoma is large and multiple, causing rectal bleeding or even anemia. Other non-specific complaints such as changes in bowel habits, constipation, or weight loss in young patients indicate rectosigmoid examination and identification of polyps suggestive of FAP [3]. The presence of colorectal adenomatous polyposis is a hallmark feature of FAP. Adenomatous polyps develop throughout the colorectum starting in childhood and adolescence [8].

For FAP patients, a prophylactic colectomy or proctocolectomy is performed, followed by regular and lifetime endoscopic evaluation, polypectomy or ablation, and additional surgery [5]. Due to the increasing number of adenomas, prophylactic cancer prevention surgery is usually recommended in the late teens or early twenties. Surgical options include subtotal colectomy with ileorectal anastomosis, total proctocolectomy, ileal pouch, and anastomosis [3].

Colonoscopic screening with timely treatment of identified lesions has resulted in a 55% reduction in CRC as the first sign that the patient is affected by FAP. Screening affects the increase in cumulative survival for patients with FAP. In one series, 30% of patients with colectomy (without proctectomy) developed rectal cancer before age 60 with a mean mortality rate of 25% [9].

2. PRESENTATION OF CASE

2.1 Anamnesis

A boy, 17 years old, was admitted to Dr. Moewardi General Hospital on November 1, 2019, with the main complaint of having blood stools for the last 1 month being admitted to the hospital and getting heavier since the previous 1 week. Blood stools occurred continuously and increased when the patient strained. He also complained that his body was getting weaker. Then, he was brought by his family to dr.OEN Hospital and then referred to the Dr. Moewardi General Hospital.

From the history, it is known that the patient had complained of abdominal pain 3 years before being admitted to the hospital; then, he underwent surgery for a tumor in the intestine at the Ngipang Hospital. He underwent a colonoscopy examination in 2016 with the results of adenomatous ileal polyps.

2.2 Physical and Advanced Examination

From physical examination, the blood pressure was 105/54 mmHg, the heart rate was 89x/minute, and the respiratoy rate was 20x/minute. The conjunctia was anemic, and the other aspects of head and neck examination was normal. The normal result also found in thorax examination, meanwhile there is visible wound scars from previous surgery in the abdomen. There are no tenderness, and no enlargement of the liver and spleen in abdomen palpation. Also no pain in right lower quadrant when deep

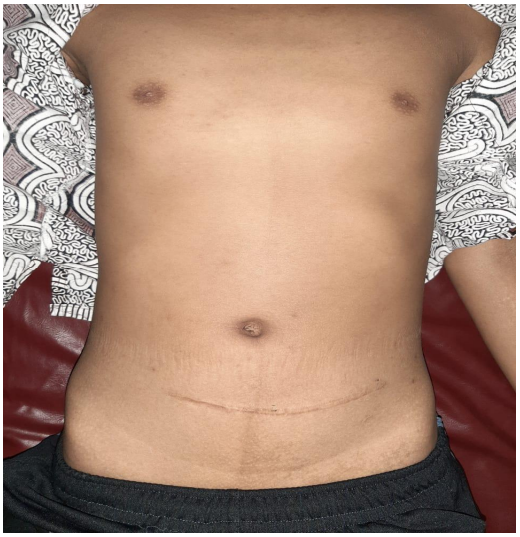

Fig. 1. Clinical Imaging front view of the abdomen

palpation performed indicate no rovsign sign. From colonoscopy examination on November 9, 2019 in Dr. Moewardi General Hospital concluded multiple polyposis with a rectosigmoid mass with malignant degeneration cannot be excluded. Ultrasound Examination Concluded Prominentia Contracted Rectum with a diameter of about 2.3 x 2.3 cm. Colon In Loop Examination concluded Multiple polyposis in the rectosigmoid colon to the distal part of the descending colon, Submucosal polyp ulceration in sigmoid colon to 1/3 distal of descending colon, and Fecal material prominent.

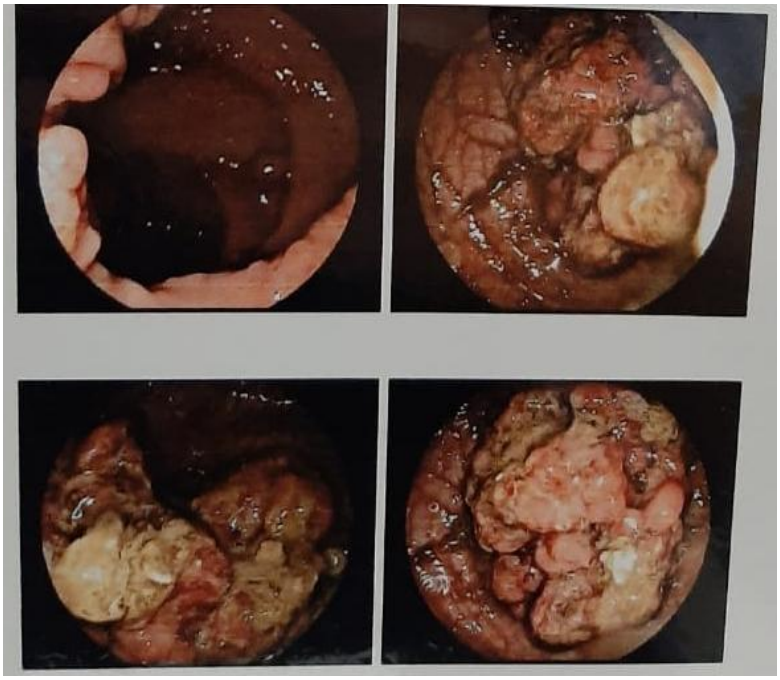

Fig. 2. Colonoscopy Examination on November 9, 2019 in Dr. Moewardi General Hospital. This colonoscopy image result at rectosigmoid with prominentia contracted rectum,a diameter of about 2,3 cm x 2,3 cm

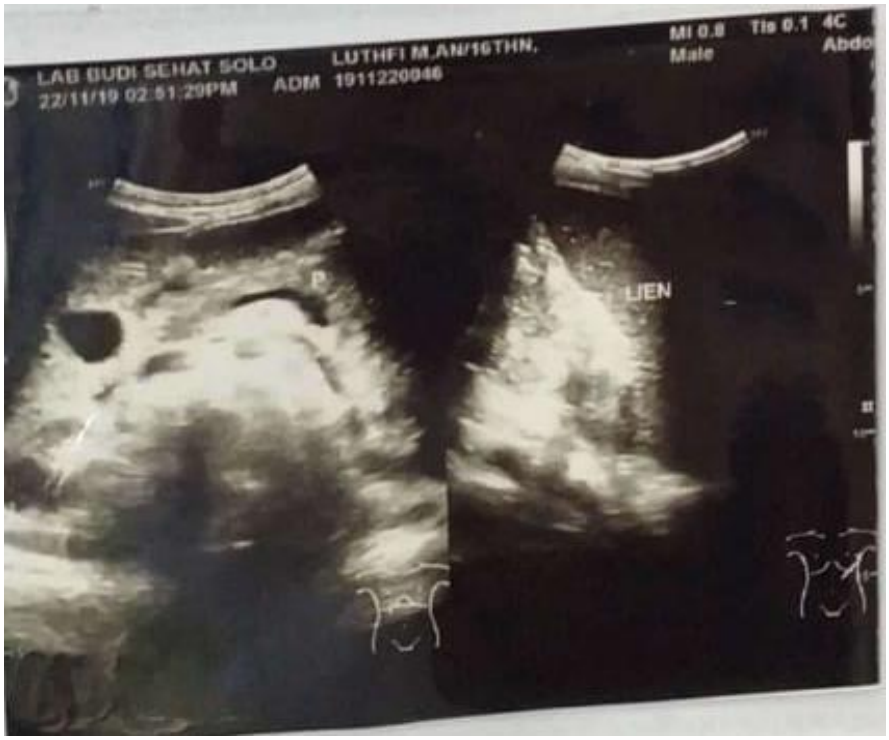

Fig. 3. Ultrasound examination

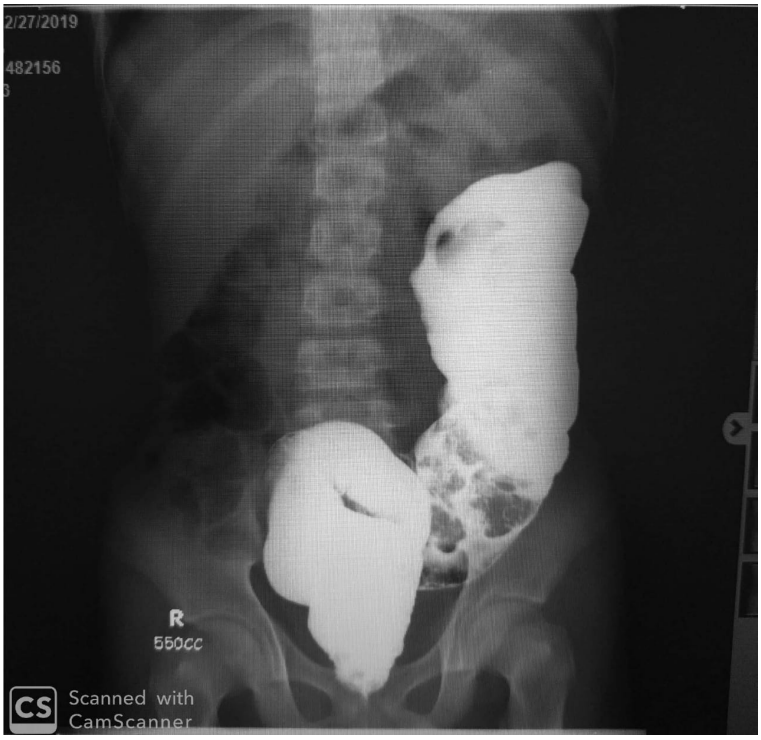

Fig. 4. Colon in loop examination using 550 cc contrast

Table 1. Pre- and post-operative blood examination

Pre-Operative Laboratory (January 14, 2020)	Post-Operative Laboratory (January 16, 2020)	Post-Operative Laboratory (January 19, 2020)
Hb : 9.0 g/dl	Hb : 11.2 g/dl	Hb : 9.2 g/dl
Hct : 32%	Hct : 37%	Hct : 32%
AL : 10.2 thousand/ul	AL : 33.0 thousand/ul	AL : 15.9 thousand/ul
AT : 543 thousand/ul	AT : 599 thousand/ul	AT : 513 thousand/ul
AE : 5.20 million/ul	AE : 5.59 million/ul	AE : 4.95 million/ul
GDS : 60 mg/dl	GDS : 193 mg/dl	
Albumin : 3.4 g/dl	Albumin : 3.2 g/dl	
Blood sodium: : 149 mmol/L	Blood sodium: : 135 mmol/L	
Blood potassium : 4.8 mmol/L	Blood potassium : 3.8 mmol/L	
Blood chloride : 115 mmol/L	Blood chloride : 101 mmol/L	
Creatinine : 0.7 mg/dl	Calcium ion : 1.14 mmol	
Ureum : 19 mg/dl		

2.3 Operation Report

Pre-Operative Diagnosis : Multiple polyposis of colon
Post-Operative Diagnosis : Multiple polyposis of colon
Treatment : Laparotomy total colectomy + ileal endorectal Pullthrough

1. Supine position in GA, the operating field toilet, narrowing with a sterile doek
2. ± 20 cm midline incision, deepening until peritoneum
3. Removing whiteline from colon, omentum visible
4. Performing total colectomy up to ± 10 cm from ileocecal juntion
5. Separating mucosa from muscle tissue until a piece of the intraabdominal colon appears
6. Performing mucocectomy while controlling bleeding
7. Pulling end ileum out into anus
8. Sewing to rectal muscle circularly
9. Washing abdominal cavity
10. Sewing abdominal surgery wound layer by layer
11. Operation completed

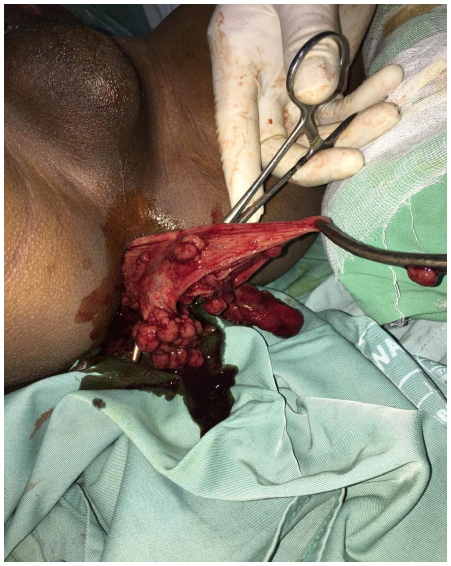

Fig. 5. Intraoperative photo

2.4 Therapy

Emergency Unit Management

- Inpatient for improvement of general condition
- IVFD NaCL 0.9% 18 tpm
- Metamizole injection 1 ampule/8 hours
- Metamizole injection 1 ampule/12 hours
- Care with pediatrics for transfusion
- PRC 4 kolf transfusion, 2 Kolf per day
- Internal medicine consultation for colonoscopic biopsy examination

Post-Operative Management

- Care in Pediatric Intensive Care Unit (PICU).
- IVFD RL: D5: Aminofluid = 2 : 1: 1, 200 cc/24 hours
- Ampicillin injection 1 g/8 hours
- Metamizole injection 1 g/8 hours
- Ranitidine injection 50 mg/12 hours.
- Maintaining rectal tube
- Medication on the second post-operative day
- Blood check.

3. RESULTS AND DISCUSSION

The 17-year-old had a history of surgery for intestinal tumors three years ago. He complained of abdominal pain and underwent a colonoscopy with adenomatous ileal polyps. The first polyp lesions of the colon appear at puberty and are usually detected when symptoms of bloody stool appear [7]. The main clinical symptom visible in this patient is continuous bloody bowel movement. Polyposis syndrome will usually show symptoms if the adenoma is at a big amount and large, in which there will be rectal bleeding no Table during bowel movements accompanied by blood [3,7].

The physical examination of the abdomen indicated no characteristic signs. Pale conjunctiva was obtained in patients supported by laboratory results showing anemia (Hb: 6.5 g/dl). Other complaints besides bloody bowel movements and anemia can be weight loss and constipation [3].

The diagnosis can be made from a history which is supported by a family history of cancer, and a physical examination; rectosigmoid examination can also be done to assess the presence of polyps [7].

Colonoscopy is the gold standard examination for detecting intraluminal colon lesions [1]. In addition to colonoscopy, ultrasound examination, barium enema examination, and genetic screening can be performed for diagnosis [4]. In this patient, ultrasound examination, barium enema (colon in loop) was performed and the gold standard examination, namely colonoscopy. From the results of the tests performed on the patient, a diagnosis of multiple polyposis was confirmed.

The patient underwent a total colectomy with ileal-endorectal pull through. This method, which includes an entire dissection of the whole mucosal-submucosal tube from the abdominal approach, followed by eversion of the tube before excision, ensures the removal of nearly all diseased mucosa. Even if the total colectomy with ileal-endorectal pull through removes all of the rectal mucosa intact, there is still a 1 cm margin of distal mucosa that is at risk of malignancy. As a result, it is thought that every patient who undergoes this sort of procedure should be monitored forever in order to detect any malignant alterations in the residual mucosa [10]. Restorative proctocolectomy is currently the most recommended procedure, but this method can impact sexual and reproductive function of the patient. Beside that, The existence of an abdominal stoma causes emotional suffering in many people.

Another alternative procedure is total abdominal colectomy with ileorectal anastomosis (TAC-IRA), which is simpler and has fewer complications [1]. Colectomy with ileoanal sack is performed when the rectum is filled with polyps so that it cannot be removed endoscopically. Proctocolectomy with ileostomy should be performed in cases of malignant changes in the rectum [7]. After a proctocolectomy, the risk of cancer is significant enough to require life-long surveillance [3]. Patients undergoing IRA procedures require long-term surveillance for up to 6-12 months and are at increased risk of cancer after surgery [1,11].

4. CONCLUSION

Multiple polyposis is hereditary,1 % occurs of all cases colorectal cancer.It cause rectal bleeding or even anemia. Sugical performed with total

colectomy and ileal-endorectal pull through is a choice for treatment after showing diagnostic from colonoscopy.

CONSENT

All authors declare that 'written informed consent was obtained from the patient (or other approved parties) for publication of this case report and accompanying images.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sdiarticle4.com/review-history/69168