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Case Report

Ulcerative Colitis with Henoch Schonlein Purpura in Pediatric Patient: A Case-Report

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Abstract:

Background: Inflammatory bowel disease (IBD) is defined as idiopathic disorder which associated with inflammation of gastrointestinal tract. Ulcerative colitis (UC) and Chron's disease are the predominant forms of IBD. Henoch Schonlein Purpura and UC share some similar symptoms and can mimic each other especially in children. In this case report, we present an eight-year-old boy who had main complaint of recurrent bloody stools and abdominal pain. Diagnosis was made through history taking, physical examination, laboratory examination and colonoscopy in this patient.

***Case*:** A boy aged 8 years and 1 month had main complaint of bloody stools with fluid consistency. This complaint was accompanied by abdominal pain all over the abdominal region and vomiting. Upon physical examination, the child was in pain. The vital signs were within normal limits. Laboratory examination showed leukocytosis. The routine stool examination showed malabsorption of fat, protein, and carbohydrates, followed with positive erythrocytes, leukocytes, epithelium, bacteria, and yeast cells; but the stool culture was sterile. Gastroscopy and colonoscopy were performed which showed erosive gastritis, duodenitis, and proctitis.

***Discussion*:** The relationship between ulcerative colitis and HSP remains unknown. Recent research showed overproduction of IgA may induce chronic inflammation in the intestinal. While HSP is IgA/immune complex mediated, IBD is thought to be predominantly T-cell driven. Recently, in IBD patients especially those with ulcerative colitis, IgA were found in their histopathologic biopsy result.

Conclusion: The relationship between ulcerative colitis and HSP remains unknown. Recent research has shown that the overproduction of IgA may induce chronic inflammation in the intestinal. As such, symptoms of both diseases may mimic each other as seen in our patients.

Keywords: children, Henoch Schonlein Purpura, inflammatory bowel disease, ulcerative colitis

Introduction

Inflammatory bowel disease (IBD) is defined as idiopathic disorder which associated with inflammation of gastrointestinal tract. Ulcerative colitis (UC) and Chron's disease are the predominant forms of IBD. Broad variation is found in the incidence rates ranging from 0.5 to 23 per 100000 for IBD, 0.3 to 15 per 100000 for ulcerative colitis and 0.1-13.9 per 100000 for Chron's disease in pediatric patients.[1] Ulcerative colitis is defined as part of IBD, marked by mucosal inflammation affecting the rectum and proximal colon.[2] Diarrhea, hematochezia, abdominal pain, constipation, weight lost are the most common symptoms in pediatric.[2] Abdominal examination may show focal tenderness on children. Perforation and abscess must also be excluded before diagnosing ulcerative colitis. Anemia, thrombocytosis, hypoalbuminemia, and increased in inflammatory markers are common findings in children. Esophagogastroduodenoscopy and ileocolonoscopy with biopsy remain the standard criteria for the diagnosis and classification of IBD in children.[3]

Henoch Schonlein Purpura (HSP) is the most common vasculitis in children with incidence rate of 8-20 per 100.000 in pediatric patient. This is a self-limiting disease and resolves in 6-8 weeks. Sixty-six percent of children experience gastrointestinal symptoms such as abdominal pain (44%), intestinal bleeding (22%), or intussusception (≤ 3%). According to Bin Lu et al, HSP and UC share some similar symptoms and can mimic each other especially in children. The relationship between HSP and UC are still unknown. There is a hypothesis that explain the overproduction of IgA that may lead to chronic inflammation in the intestine.

In this case report, we present an eight-year-old boy who had main complaint of recurrent bloody stools and abdominal pain. Diagnosis was made through history taking, physical examination, laboratory examination and colonoscopy in this patient.

Case

A boy aged 8 years and 1 month had main complaint of bloody stools with fluid consistency. This complaint was accompanied by abdominal pain all over the abdominal region and vomiting. There was no fever, joint pain, or red eyes. The child was brought by his parents to the emergency room at regency hospital for treatment. The child was then diagnosed with lower gastrointestinal bleeding and referred to the dr. Kariadi Hosptial, Semarang to seek for further diagnosis.

Upon physical examination, the child was in pain. The vital signs were within normal limits. Anthropometry examination showed the impression of malnutrition with normal stature. The abdomen looked convex, no palpable liver and spleen. Abdominal tenderness was found on the entire abdominal region.

Laboratory examination showed leukocytosis (19.300/ μL). The routine stool examination showed malabsorption of fat, protein, and carbohydrates, followed with positive erythrocytes, leukocytes, epithelium, bacteria, and yeast cells; but the stool culture was sterile. Abdominal CT scan was also performed which showed minimal thickening of the rectal wall (maximum thickness ± 1.45 cm, length ± 4.59 cm) with inhomogeneous enhancement after contrast injection (suspect an inflammatory process); minimal fluid collection in the pelvic cavity; and multiple lymphadenopathies in the paraaortic region, right left mesenteric and left right inguinal (largest size ± 1.44 x 0.56 cm in left mesenteric).

After 4 days of treatment, abdominal pain in the children was decreased and PUCAI score was 5. Gastroscopy and colonoscopy were performed. The results showed erosive gastritis, duodenitis, and proctitis. (**Figure 1**)

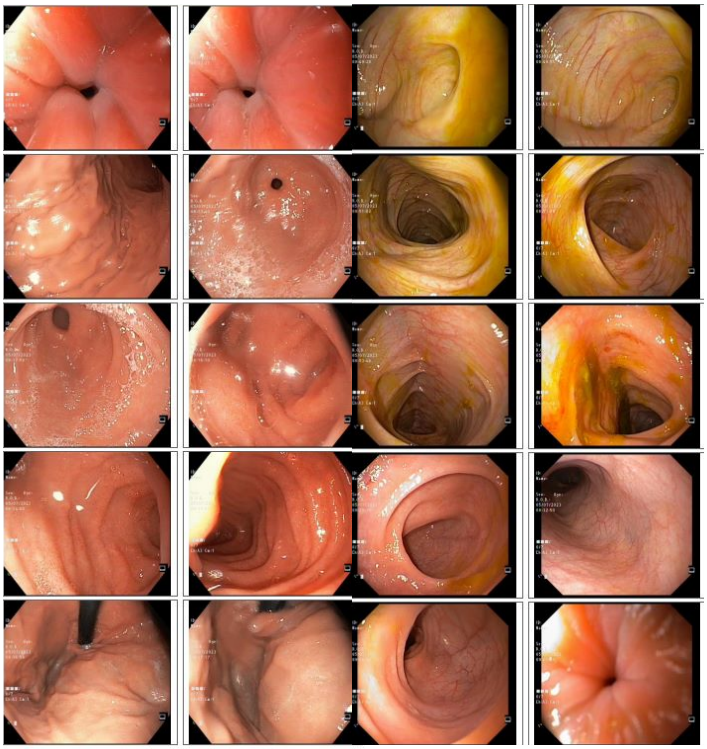

Figure 1. Gastroscopy and colonoscopy features of the patient.

The result of the colonoscopy biopsy showed active chronic colitis and active chronic proctitis, while the result of the gastroscopy biopsy showed chronic, non-atrophic, non-metaplastic, non-dysplastic gastritis with negative Helicobacter pylorii.

Further evaluation of patient's symptoms after discharged was assessed in our clinic. The patient was treated with 5-aminosalicylic acid (5-ASA) as anti-inflammatory medication on the intestinal mucosa via oral route. Main symptoms in Henoch

Schonlein Purpura were found in this patient with palpable purpura, abdominal pain and gastrointestinal bleeding. (**Figure 2**) The patient was then referred to Allergic Immunology Clinic and being diagnosed with Henoch Schonlein Purpura (HSP).

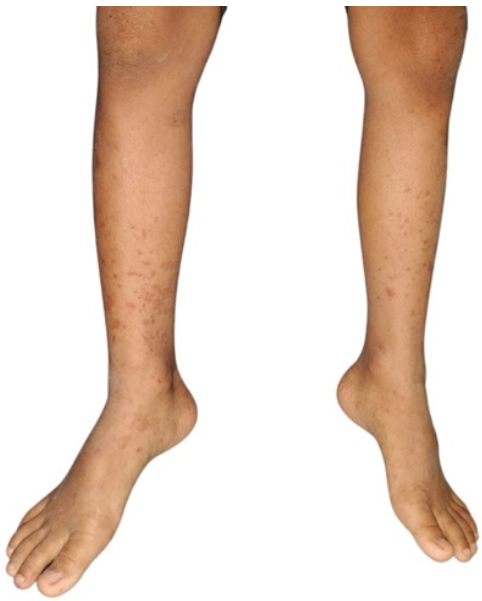

Figure 2. Clinical features of palpable purpura in the patient.

Discussion

The patient main complaint was bloody stools with abdominal pain. This manifestation was initially thought to be part of ulcerative colitis clinical manifestation. However, HSP clinical manifestation was also found in this patient with palpable purpura and abdominal pain. Ulcerative colitis is defined as part of IBD, marked by mucosal inflammation affecting rectum and proximal colon.[2] Diarrhea, hematochezia, abdominal pain, constipation and weight loss were the most common symptoms in pediatric patients and similar to those presented in our patient.[1]

Esophagogastroduodenoscopy and ileocolonoscopy were performed in our patient, which was in line with a study conducted by Bradley et al. They stated that esophagogastroduodenoscopy and ileocolonoscopy with biopsy is the gold standard for the diagnosis and classification of IBD in children.[3] The patient was treated with 5-ASA according to the recommendation to exert anti-inflammatory effect on the intestinal mucosa. This medication may be administered in form of oral formulation that release the active moiety 5-aminosalicylic acid (5-ASA) in the ileum and colon, or topically via enema or suppository.[3] A large observational study showed that 30% of children with UC will maintain remission with administration of 5-ASA drugs alone.[4]

The diagnosis of HSP is determined by the presence of palpable purpura with lower limb predominance in addition to 1 or more of the following 4 findings including:

diffuse abdominal pain, arthritis or arthralgia, renal involvement (proteinuria, decreased in renal function), positive histopathologic findings (leukocytoclastic vasculitis with predominant IgA deposits on skin biopsy, or proliferative glomerulonephritis with predominant IgA deposit on kidney biopsy).[5] Moreover, IgA1-dominant immune deposits which affects small vessels (predominantly capillaries, venules, or arterioles) was commonly found in pediatric patients.[6] Clinical manifestation of IgA vasculitis due to HSP are often non- specific and can mimic those of other GI disorders, including nonspecific gastroenteritis, infectious gastroenteritis, and IBD (particularly Crohn disease). To confirm the diagnosis, endoscopic findings according to some research is recommended. Endoscopic findings may show mucosal congestion, nodular changes, redness, petechiae, ulcers, or hematoma-like protrusions reflecting intramural hemorrhage.[6] This condition is self-limiting and resolves in 6-8 weeks.

The relationship between ulcerative colitis and HSP remains unknown. Recent research showed overproduction of IgA may induce chronic inflammation in the intestinal. While HSP is IgA/immune complex mediated, IBD is thought to be predominantly T-cell driven. However, the link between T-cell- and IgA-mediated immunity has been studied in secondary IgA nephropathy due to hepatic and intestinal inflammation. Recently, in IBD patients especially those with ulcerative colitis, IgA were found in their histopathologic biopsy result. [7]

Conclusion

The relationship between ulcerative colitis and HSP remains unknown. Recent research has shown that the overproduction of IgA may induce chronic inflammation in the intestinal. As such, symptoms of both diseases may mimic each other as seen in our patients.

Conflict of Interest

None declared

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