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CASE REPORT

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Early diagnosis and treatment of perianal Crohn's disease in a 1-year-old infant: Case report and review of literature

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Key Clinical Message

Inflammatory bowel disease is rare in infants and it includes perianal Crohn's disease, which is inflammation at or near the anus. An early diagnosis is essential to prevent the complications that may affect the development and growth of the child.

KEYWORDS

case report, Crohn's disease, infants, inflammatory bowel disease, perianal abscesses, perianal Crohn's disease

1 | INTRODUCTION

Inflammatory bowel disease (IBD) is a chronic inflammatory disorder that affects the gastrointestinal tract and contains both Crohn's disease (CD) and ulcerative colitis (UC). Any region of the gastrointestinal tract, from the mouth to the anus, can be affected by CD, and perianal illness is frequently present. Perianal Crohn's disease (PCD) is defined as inflammation at or close to the anus, including tags, fissures, fistulae, abscesses, or stenosis. The estimated occurrence rate of PCD in the pediatric population diagnosed with CD ranges from 13.6% to 62%.[1] It is considered to develop as a result of an abnormal immune reaction triggered by several environmental factors in genetically susceptible individuals.[2] In extensive cohort studies, the male gender and initial corticosteroid therapy have been linked to a higher likelihood of developing perianal disease following a diagnosis of CD, whereas in alternative studies, the female gender has been associated with non-fistulizing perianal involvement.[3] The main symptoms of CD are typically abdominal pain and cramping, frequent diarrhea, fever, and weight loss. Occasionally, patients

with colonic involvement may also experience fatigue, anorexia, rectal bleeding, or bloody diarrhea.[4] External and rectal examinations followed by endoscopy, pelvic magnetic resonance imaging (MRI), and surgical evaluation are particularly helpful for diagnosis. Pelvic MRI is the gold standard for the assessment of perianal fistulas and abscesses. Numerous PCD problems that negatively affect the quality of life include recurrent perianal infections, chronic fistulae, fecal incontinence, and rectal strictures that may necessitate fecal diversion.[3] The management is complex, with a combination of aggressive medical management with antibiotics and biological agents and the frequent need for minor surgical procedures. Early use of biologic drugs may stop or postpone the development of fistulizing PCD.[5] We report a 1-year-old infant who presented with melena diarrhea and bilateral perianal abscesses.

2 | CASE HISTORY/EXAMINATION

A 1-year-old infant was admitted to our Department of Pediatrics for the study of their condition and treatment after developing melena 3–4 times per day 3 days ago. Upon admission to our hospital, his body weight was 7500 g (50th percentile), his height was 75 cm (below 10th percentile), and his head circumference was 43 cm (below 10th percentile), indicating weight loss (Figure 1). The pregnancy and delivery were unremarkable, as was the family history. Clinical findings: the patient was in a reduced general status, dehydrated (skin fold +), pale with dry skin, rash on arms and legs, periorbital pitting edema, mouth ulcers, severe diaper dermatitis (Figure 2), and perianal lesions were noticed. Physical examination of the anal area revealed tender bilateral abscesses with pus-like discharge (Figure 3). Abdominal examination revealed no tenderness or organomegaly. In the history, the patient had been experiencing prolonged intermittent fever, yellow watery diarrhea 6–7 times per day, and reduced general status for the last 27 days. Birth weight: 4600 grams; at the age of 10 months: 8500 g. The patient received symptomatic treatment at the first prescription: intravenous fluids and antibiotics. The patient was rehospitalized for the second time with worsening symptoms. Laboratory evaluation demonstrated increased inflammatory biomarkers: white blood cell count (WBC) of 9300 per

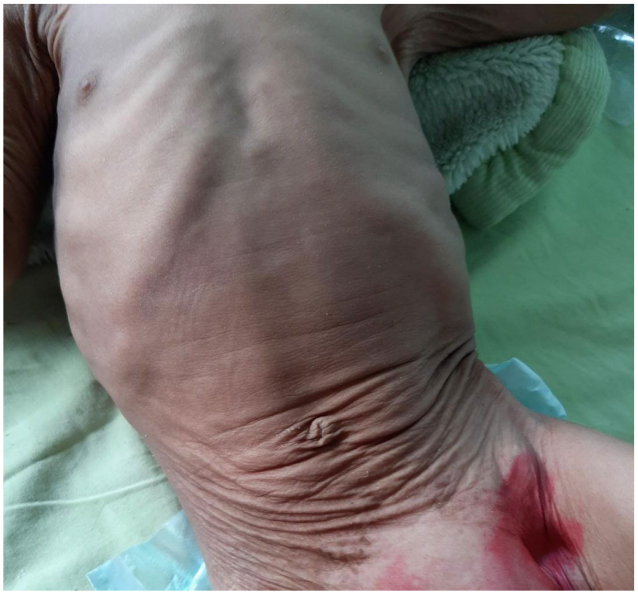

FIGURE 1 Severe degree of atrophy of muscles and subcutaneous fat in a malnourished infant with marasmus.

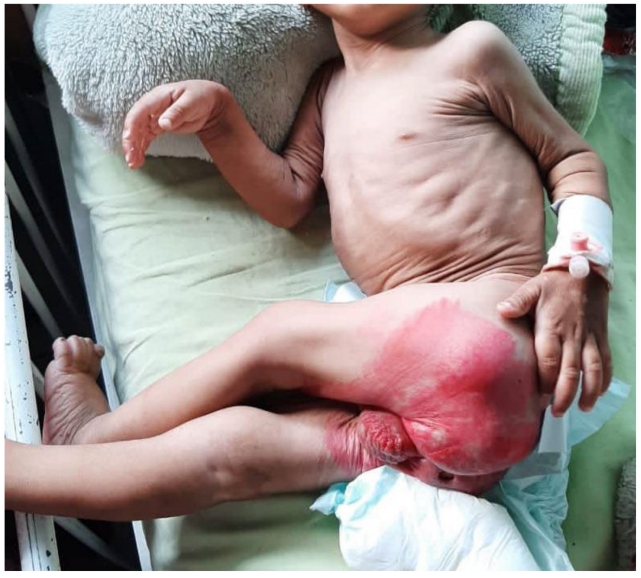

FIGURE 2 Diaper dermatitis with diffuse erythema and large, eroded areas.

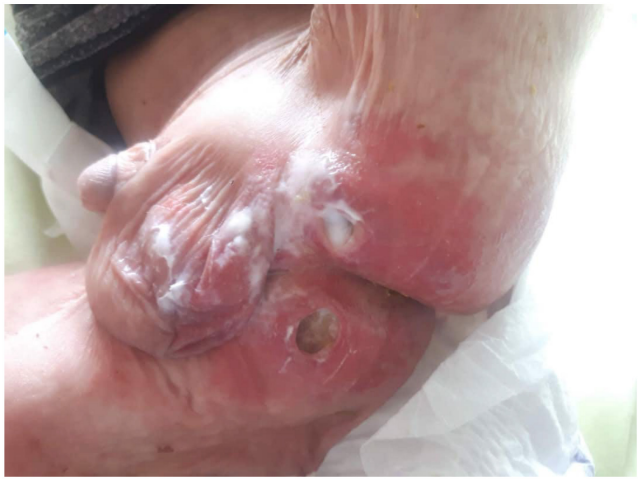

FIGURE 3 Bilateral anal abscesses with pus-like discharge.

TABLE 1 Timeline for the laboratory tests.

Past laboratory results									
	White blood cells (WBC)	**C-reactive protein (CRP)**	**Hemoglobin (HB)**	**Platelets count (PLT)**	**Prothrombin time (PT)**	**Partial thromboplastin time (PTT)**	**Ferritin**	**Albumin**	**Creatine phosphokinase (CPK)**
Day 1	9300 per microliter	52 mg/L	6.5 g/dL	196,000 per microliter	69%	18 sec	3.2 mg/L	2 g/dL	16 Units/l
Day 4	6100 per microliter	52 mg/L	9.1 g/dL	59,000 per microliter	48%	22 sec			

First day of inpatient admission							
White blood cells (WBC)	**C-reactive protein (CRP)**	**Hemoglobin (HB)**	**Platelets count (PLT)**	**Platelets count (PLT)**	**Partial thromboplastin time (PTT)**	**Na^+**	**Albumin**
7200 per microliter	73 mg/L	9.8 g/dL	61,000 per microliter	61%	24 sec	132 mmol/L	2 g/dL

Second day of inpatient admission							
White blood cells (WBC)	**C-reactive protein (CRP)**	**Hemoglobin (HB)**	**Platelets count (PLT)**	**Platelets count (PLT)**	**Partial thromboplastin time (PTT)**	**Na^+**	**Albumin**
5540 per microliter	88 mg/L	7.4 g/dL	10,000 per microliter	100%	36 sec	129.4 mmol/ L	2 g/dL
Zn	Mg	IgA	IgM	IgG	ESR	D-Dimer	Fecal calprotectin
57 Micromol/L	2.4 Micromol/L	113	71	850	46 mm/h	1.02 mg/L	957 mg/Kg

microliter, C-reactive protein (CRP) of 52 mg/L, hemoglobin (Hb) level of 6.5 g/dL, and ferritin 3.2 mg/L. The serum albumin level was reduced to 2 g/dL, and creatine phosphokinase was 16 units/L. Further evaluation suggested coagulopathy. Platelet count: 196000; prothrombin time: 69%; partial thromboplastin time: 18 sec. After 4 days of antibiotic coverage and blood transfusions, laboratory test results were: (Table 1).

The patient was discharged without any improvement in symptomatology.

3 | DIFFERENTIAL DIAGNOSIS, INVESTIGATIONS, AND TREATMENT

Therefore, upon admission to the children's hospital, we suspected very early-onset IBD (VEO-IBD) presenting with perianal abscesses, where active ulcers may result in coagulopathy. Laboratory tests performed on the day of admission demonstrated: (Table 1).

Urine, stool, and blood samples were taken for culture. The Na^{+}concentration was 132 mmol/L, so it was corrected. Vital signs were monitored at the unit (fever and bloody stool), and based on laboratory evaluation, the patient received symptomatic treatment: exclusive enteral nutrition providing 100% of caloric needs through liquid formula, IV fluids, and omeprazole at a dose of 2 mg/kg. Broad-spectrum antibiotics were administered: cefotaxime, vancomycin, and metronidazole. Diaper dermatitis was treated with zinc cream. Further evaluations were conducted the next day: (Table 1).

Vitamin supplements (konakion, zinc) were given along with a whole blood transfusion, platelets, and albumin. Stool examination revealed the presence of white blood cells (++++), red blood cells (++), and fungi, which were treated with fluconazole. Urine culture indicated an inflammatory situation, and blood culture revealed sepsis with gram-negative bacilli sensitive to tazobactam. Fecal calprotectin levels were found to be 957 mg/kg. Abdominal ultrasound showed no abnormalities; however, rectal ultrasound revealed cutaneous edema and unclear fluid in the abscess area. Colorectal endoscopy managed to reach 35 cm before stopping due to bleeding and revealed multiple ulcerations and anal fissures (Figure 4). Biopsies were taken, and pathological findings confirmed the diagnosis of early-onset CD. Treatment was initiated with corticosteroids (1 mg/kg) and azathioprine (1-2 mg/kg) in a timely manner. Sulfasalazine at a dose of 35 mg/kg divided into three doses per day plus folic acid were also prescribed. The patient was discharged with a recommendation for follow-up after 3 months.

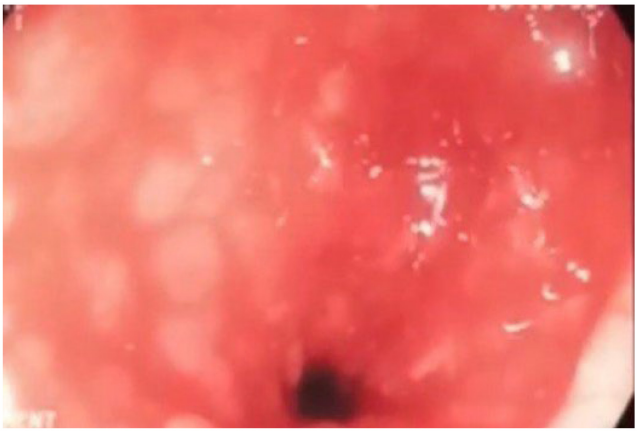

FIGURE 4 Colorectal endoscopy shows ulcerations and fissures, which indicate Crohn's disease.

4 | DISCUSSION

Crohn's disease is a form of IBD that leads to tissue damage and fibrosis in the gastrointestinal tract.[6] Very early-onset IBD, affecting children under six, can stem from a single gene mutation.[6] Immunodeficiency patients are at higher risk for IBD. The development of VEO-IBD may be affected by genetic and environmental factors.[7] Inheritance could play a role, especially if the child's parents are third-degree relatives.

In most countries, the incidence and prevalence of pediatric-onset IBD are still increasing. The countries with the highest incidence and prevalence of VEO-IBD are those with historically high rates of IBD (Western countries). The most current statistics show that it has started to appear in areas where it has not been previously documented. The incidence of VEO-IBD per 100,000 person-years was 0.2–1.4 in Asia, 0.4–3.3 in Europe, and 0.5–3.6 in Canada.[8] While IBD is less widespread in developing nations, when countries become more developed, the incidence of IBD rises. The incidence of IBD in the children of immigrants from developing nations to Western nations is comparable to that of Western populations.[9] CD can occur at any age.

Both males and females are equally affected, with IBD commonly seen in adolescents and young adults. Approximately 25% of patients with IBD present before the age of 20. Among children with IBD, 4% were present before age 5 years and 18% before age 10 years, with the peak onset in adolescence.[10] Factors like cesarean delivery, lack of breast milk, high dietary fat intake; and early antibiotic use may increase the risk of IBD.[9] Compared to healthy people, children with IBD have greater rates of anxiety and depression disorders. Additionally, colon cancer risk is higher in people with UC and CD who affect the colon.[4] Typically, the primary symptoms are

TABLE 2 Review for some similar cases.

Paper No.	First author/ Year of publication	Age/sex of pt	Main complaint	Diagnostic tests	Findings	Treatment	Follow up
1	de Zoeten EF/2013	N/A	Constipation, fecal incontinence, recurrent infections, sepsis, compromise of sexual function, and diminished quality of life	External and anal exam, MRI, CT, EUS, and EUA	1-tissue destruction: anal fissures, tags, and deep ulcers 2-fistulae and abscesses 3-rectal stricture	Surgery, antibiotics, immunosuppressive agents, and biologics (anti-TNF agents).	N/A
2	Seung Kim/2017	N/A	N/A	Rectal exam, EUS, MRI, EUA Stricture: CT & MRI	N/A	Perianal CD: surgery & medical treatment Stricture: physical dilation, bowel resection, or surgical stricureplasty Obstruction: conservative management, anti-inflammatory treatment (corticosteroid) or surgery Abdominal abscesses: antibiotics or radiology guided percutaneous drainage Fistulas: surgery Hemorrhage: anti-TNF therapy, angiographic interventions, transfusions, or surgery	In 115 pediatric CD patients who had surgery, 50% and 73% showed clinical recurrence at 1 year and 5 years, respectively. Thiopurine for risk for relapse. Ileocolonoscopy in 6-9 months after surgery
3	Annika Mutanen/2020	N/A	Debilitating disease, recurrent perianal, sepsis, and obstructive defecation. Incontinence, need for feces, diversion, and impaired quality of life	-External and rectal exam -Pelvic MRI, Endoanal US	External and rectal exam: Anal skin tags -Hemorrhoids -Anal fissures -Rectal strictures Pelvic MRI, endoanal US: Abscess & fistula	Medical management: -Antibiotics & biologics (anti-TNF agents). Surgical treatment & Innovative approaches: -Stem cell therapy -Hyperbaric oxygen	N/A

(Continues)

TABLE 2 (Continued)

Paper No.	First author/ Year of publication	Age/sex of pt	Main complaint	Diagnostic tests	Findings	Treatment	Follow up
4	Monika Zbroja/2020	Pt1:12/M Pt2:12/F Pt3:15/M Pt4:16/M Pt5:16/M	All: prolonged pain in perianal area, worsened when sitting.	All: Intestinal and transperineal US	Pt1: -1st US: inflammatory infiltration & abscess formation at left side of anus -2nd US: fistula originating from abscess, reaching skin level. Pt2: -heterogeneous hypoechoic area -Intergluteal fistula -Inflammatory infiltration -Forming abscess at level of intergluteal fistula Pt3: a 18-mm long and 3–4 mm fistula reaching the sphincter Pt4: −5–6 mm perianal abscess on the left -Fistula reaching the sphincter (25 mm in length and 5 mm in width) Pt5: abscess (measured 23 mm × 9 mm)	N/A	N/A
5	Lester Tsai/2022	1-Bruckner et al.: Pediatrics, M/F:59/41 2-Vernier-Massouille et al.: Pediatrics, M/F:53.7/46.3	1- 742 Pts with CD 93 Pts with Perianal CD 2- 404 with CD	N/A	Disease location: 1-ileal (6.7%), colonic (12.8%), ileocolonic (21.3%), upper GI tract (1.2%)	N/A	Mean/Median follow-up duration (Years) 1.2 & ≥2
6	Mathew Wright/2019	4/M	Perianal abscess, constipation, rectal bleeding -growth failure, delayed bone age, and BMI:13	Colonoscopy, Mucosal biopsy, NGS	1-left-sided colitis characterized by deep linear ulcerations with skip lesions 2-chronic granulomatous inflammation 3-likely pathogenic and rare heterozygote variant in the NCF4 gene	Anti-TNF therapy (infliximab, adalimumab), vedolizumab, ileostomy, and allogeneic HSCT	6-mo: endoscopy: complete mucosal healing with no residual disease.

TABLE 2 (Continued)

Paper No.	First author/ Year of publication	Age/sex of pt	Main complaint	Diagnostic tests	Findings	Treatment	Follow up
7	QI-QI Li/2022	N/A	N/A	N/A	N/A	Exclusive enteral nutrition therapy, Ustekinumab, Vedolizumab, Anti-TNF: Infliximab, Adalimumab & Golimumab, CTLA4 agonists: Abatacept & Ipilimumab, Hematopoietic Stem Cell Transplantation, Surgery, Fecal microflora transplantation	N/A
10	Michael J. Rosen/2015	N/A	Growth failure, anemia, perianal disease, and extraintestinal manifestations	1-Physical 2-Lab Exam 3-Endoscopy 4-imaging: CT, MRI, endoscopic US	1-Physical: acute weight loss, Perianal tags, fissures, fistulas, or abscesses 2-Lab Exam: anemia, thrombocytosis, hypoalbuminemia, and elevated levels of inflammatory markers 3-Endoscopy in UC: discontinuous inflammation and discrete aphthous or linear ulceration 4-Imaging: fistulas, abscesses, and intestinal strictures	Corticosteroids, Enteral Nutrition Therapy, Aminosalicylates: 5-ASA, azathioprine, 6-MP & MTX Anti-TNF Therapy: infliximab, adalimumab, certolizumab pegol, golimumab, Total colectomy, ileal pouch anal anastomosis	Complications: deficiencies, growth failure, colon cancer, depressive and anxiety disorders Medical complications: −5-ASA: nausea, headache, fever, and rash -Thiopurines: myelosuppression, elevated AST/ALT levels, pancreatitis & lymphoma -Anti-TNF: injection site reactions, a psoriasis-like rash & risk of infections
11	Soo Hyun Um/2021	12/M	Prolonged intermittent fever, weight loss of 3 kg/mo -Intermittent abd pain, and diarrhea	Ileocolonoscopy, histology, MRE, MRI	1-aphthous ulcers in the terminal ileum and colon 2-cryptitis and crypt abscess 3-multifocal asymmetric wall thickening with enhancement and diffuse restriction in the pelvic ileal loop 4-complex perianal fistula with abscess formation in the anterolateral aspect of the upper anus	Seton operation, azathioprine, metronidazole	1-wk: delayed healing. Imfliximab 14-wk: endoscopic remissio, pseudopolyp in anal canal 1-y: complete healing of perianal fistulizing disease
12	Jeffery Chang/2019	12/M	Persistent idiopathic, swelling of lower lip	1-Physical 2-MRI 3-Punch biobsy of lower lip 4-Special stainings for fungi, spirochetes, acid-fast bacilli	1-Physical: Perianal fistula 2-MRI: Unremarkable 3-Punch biobsy of lower lip: Multiple non-necrotising granulomasm chronic inflammatory infiltrate, edema and lymphangiectasia. 4-Fungi stainings: Negative.	Metronidazole, ciprofloxacin, topical 0.03% tacrolimus and Oral prednisone	6-mo: sypts improved without full remission

(Continues)

TABLE 2 (Continued)

Paper No.	First author/ Year of publication	Age/sex of pt	Main complaint	Diagnostic tests	Findings	Treatment	Follow up
13	Jonathan Cordova/2016	13/M	Painful perirectal swelling, bloody-mucoid discharge, abd pain, and diarrhea	1-Physical 2-Lab exam 3-Upper GI endoscopy & ileocolonoscopy 4-MRI	1-Physical: Anal fissure -Overlying skin tag at the 6 o'clock position -Mild perianal erythema without swelling -No visible fistula 2-Lab exam: Elevated fecal calprotectin, CRP, & ESR 3-Endoscopy: Patchy esophagitis, gastritis and duodenitis, ileitis with a granuloma, & moderately active pancolitis 4-MRI: Segment of distal ileum (approx 20 cm) up to the ileocecal Valve + multiple wall thickenings & short segments of saccular dilation	Prednisone, 6-mercaptopurine (6-MP), mesalamine	1st f/u: lower toleration of PSL & clinical remission on 6-MP and mesalamine 2nd f/u: increased abdominal pain, increased PSL 3rd f/u: worsening abdominal pain, diarrhea, & decreased appetite, increased PSL. 4th f/u: two perianal abscesses, required surgery
14	Paulo Gustavo Kotze/2018	N/A	N/A	N/A	N/A	Conventional therapy: 1-Pearson et al.: AZA/6-mercaptopurine, 41 Pts. 2-Thia et al.: Metronidazole, 7 Pts & Ciprofloxacin, 10 Pts. Biological agents: 1-Present et al.: IFX, 94 Pts 2-Sands et al.: IFX, 282 Pts 3-Colombel et al.: ADA, 70 Pts 4-Schreiber et al.: CZP, 28 Pts 5-Sandborn et al.: VDZ, 17 Pts 6-Sands et al.: UST, 37 Pts Local injections of anti-TNF agents: 1-Poggioli G et al.: IFX, 15 Pts 2-Asteria et al.: IFX, 11 Pts 3-Alessandroni et al.: IFX, 8 Pts 4-Tonelli et al.: ADA, 12 Pts	Conventional therapy: Efficacy with agent & Efficacy with placebo 1-54% & 21% 2-Metronidazole: 0%, 12.5% Ciprofloxacin: 30%, 12.5% Biological agents: Fistula closure (%) 1- 55% 2- 36% 3- 60% 4- 36% 5- 41.2% 6- 24.7% Local injections of anti-TNF agents: Fistula closure & Fistula partial response: 1- 66.7% (10/15) 2- 36.4% (4/11) & 72.7% (8/11) 3- 87.5% (7/8) 4- 75% (9/12) & 25% (3/12)

TABLE 2 (Continued)

Paper No.	First author/ Year of publication	Age/sex of pt	Main complaint	Diagnostic tests	Findings	Treatment	Follow up
15	Andrew A.M. Singer/2016	Pt1:17/F Pt2:11/M Pt3:8/F Pt4:11/F Pt5:14/M Pt6:13/M Pt7:11/M Pt8:9/M	Pt1:Epigastric pain, hematochezia, loose stools, decreased appetite Pt2:Constipation, hematochezia, abd pain Pt3:Constipation, hematochezia Pt4:Labial swelling, constipation, hematochezia Pt5:Abd pain, hematochezia Pt6:Diarrhea, abd pain Pt7:Pain, bowel movements, hematochezia. arthralgias Pt8:Fatigue	Pt1:Physical exam/endoscopy Pt2:1-MRI, 2-Anoscopy 3-biopsy. Esophagogastroduodenoscopy and colonoscopy Pt3:Physical exam/endoscopy, MRI Pt4:Physical exam & MRI Pt5:Physical exam & MRI Pt6:Physical exam Pt7:MRI Pt8:Physical exam	Pt1: Physical exam: Skin tags - endoscopy: perianal abscess Pt2: 1-MRI: Hemorrhoids 2-Anoscopy: friable mucosa 3-Biopsy: chronic granulomatous inflammation Pt3: Physical exam: Skin tag Pt4: Physical exam: Skin tags Pt5: Physical exam: Skin tags Pt6: Physical exam: Perianal abscess Pt7: MRI: Perianal abscess Pt8: Physical exam: Perianal fissure, perianal abscess & perianal fistula.	Pt1-3-4:Infliximab, ciprofloxacin, fistulectomies. Pt2-7:Infliximab, metronidazole Pt5:Infliximab methotrexate Pt6:Infliximab, corticosteroids, mesalamine Pt8:Mesalamine, metronidazole	Pt1: fistula healed after 18 mo Pt2: fistula was closed on external exam 15 mon after diagnosis of Crohn's disease

Abbreviations: 5-ASA: 5-Aminosalicylic Acid; 6-MP: 6-Mercaptopurine; abd pain, abdominal pain; ADA, Adalimumab; AZA, Azathioprine; CBC, Complete blood count; CD, Crohn's disease; CRP, C-reactive protein; CT, Computed tomography; CTLA-4, Cytotoxic T-lymphocyte–associated antigen 4; CZP, Certolizumab pegol; ESR, Erythrocyte sedimentation rate; EUA, Examination under anesthesia; EUS, Endoscopic ultrasound; f/u, follow up; F, Female; GI, Gastrointestinal; HSCT, Hematopoietic stem cell transplantation; IBD, Inflammatory bowel disease; IFX, Infliximab; IVIG, Intravenous immune globulin; M, Male; Mo, month; MRI, Magnetic resonance imaging; MTX, Methotrexate sodium; NGS, Next-generation sequencing; no, number; PCD, Pediatric Crohn's disease; PSL, prednisone; Pt, Patient; TNF, Tumor necrosis factor; UC, Ulcerative colitis; UGI, Upper gastrointestinal; US, Ultrasound; UST, Ustekinumab; VEO-IBD, Very-early onset Inflammatory bowel disease; Y, years.

gastrointestinal symptoms such as abdominal pain, recurrent diarrhea, fever, and weight loss.[4]

Patients with CD may experience extraintestinal manifestations like oral ulcers, eczema, folliculitis, and arthritis, with an increased risk of developing B-cell lymphoma.[6] In our case, the patient was admitted with melena diarrhea 6-7 times per day and a prolonged intermittent fever for the last month, and was hospitalized for acute enterocolitis. Diagnosis can be difficult due to nonspecific gastrointestinal symptoms. Complications of ongoing inflammation may include intestinal fibrostenosis, fistulas, perianal fistulas, and/or abscesses.[11]

Approximately 10% of pediatric patients newly diagnosed with CD may have perianal fistulas and/or abscesses.[12] A good history should be taken, and perianal lesions are less often brought to attention. Our patient presented with perianal abscesses 27 days after onset, exhibiting signs of dehydration, pale dry skin, periorbital pitting edema, mouth ulcers, and severe diaper rash. Physical examination revealed tender bilateral perianal abscesses with pus-like discharge. The Diagnostic workup included external and rectal exams, pelvic MRI, endoscopy, and assessment under anesthesia.[3] Upper and lower gastrointestinal endoscopies, along with perianal ultrasounds, were conducted in this case.

Current treatment options for PCD include surgery, antibiotics, immunomodulators, and biologics.[13] Corticosteroids should be used cautiously for perianal fistulas in CD due to potential negative outcomes.[1] Antibiotics like metronidazole and ciprofloxacin are first-line therapy for perianal abscesses.[2] Immunomodulators such as 6-mercaptopurine or azathioprine have demonstrated improvement in fistula closure in children with PCD.[13] Anti-TNF medications like infliximab, adalimumab, or certolizumab, along with seton placement and curettage of fistula tracks under anesthesia, result in perineal fistula healing in approximately 50% of cases. New biological agents like vedolizumab (VZD) and ustekinumab (UST) are considered second-line treatments for patients with perianal fistulas.

Several mesenchymal stem cell (MSC)-based therapeutic strategies have shown promise for PCD.[14] Seton procedures are often used for complex perianal fistulas. Fecal diversion with an ileostomy or colostomy may be an option for patients with severe, complex perianal illnesses. CD cannot be fully cured. Our patient received symptomatic treatment: EEN, IV fluids, omeprazole, and a broad spectrum of antibiotics: cefotaxime, vancomycin, and metronidazole. Diaper dermatitis was cured by zinc cream. When the diagnosis was made, we initiated treatment with corticosteroids, azathioprine, sulfasalazine, and folic acid. The patient was discharged with the recommendation to come back for follow-up after 3 months. Patients should have their growth and weight charts displayed for visual inspection, and they should all undergo screening laboratory tests (complete blood cell counts, albumin, CRP, and sedimentation rate).[15]

After 8–10 years of disease progression, surveillance colonoscopies every 1–2 years are advised by guidelines from the United States, the United Kingdom, and the European Crohn's and Colitis Organization (ECCO). Early and frequent monitoring should be considered for high-risk patients. For pediatric patients who had surgery, ileocolonoscopy should be considered 6–9 months after the procedure.[2] The prevalence and incidence of pediatric IBD are rising worldwide and vary depending on regions, especially in the juvenile population. However, there is a certain lack of data in developing nations, which should be the focus of future studies.[8] Pediatric IBD should be recognized as a primary health concern to address its significant impact,[9] (Table 2).

In conclusion, the CD should be expected in infants with perianal lesions, regardless of age. We report a case of PCD in an infant after a history of DIC. What characterizes the case is the early onset of symptoms and the rapid progression of the disease despite its young age. A diagnosis should be made in time to obtain treatment and avoid complications.

AUTHOR CONTRIBUTIONS

Marah Mansour: Formal analysis; project administration; writing – review and editing. **Georgette Doumet:** Data curation; formal analysis; writing – original draft. **Ahmad Kadan:** Formal analysis; writing – original draft. **Dina Bajour:** Formal analysis; writing – original draft. **Marwa Madania:** Formal analysis; writing – original draft. **Muhammad Adnan Alsarraj:** Formal analysis; writing – original draft. **Ahmad Alhamwi:** Formal analysis; writing – original draft. **Kamar Antakli:** Formal analysis; writing – original draft. **Abdullah Almohammad:** Formal analysis. **Yaman Saiouf:** Formal analysis; writing – review and editing. **Jaber Mahmod:** Project administration; supervision.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no conflicts of interest.

DATA AVAILABILITY STATEMENT

Not applicable. All data (of the patient) generated during this study are included in this published article and its supplementary information files.

CONSENT

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy.

GUARANTOR

The Supervisor J.M is the guarantor of this work.

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