

Abdominal Pain and Anemia in Children

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Received: January 15, 2023; **Published:** January 31, 2023

Abstract

Recurrent episodes of unexplained abdominal pain and diarrhea in a child with unexplained anemia which were treated symptomatically before catching a red alarm and doing the appropriate investigations to reach a rare diagnosis in a child, Crohn's disease.

Keywords: Children; Abdominal Pain; Anemia; Weight Loss; Fever; Diarrhea

Abbreviations

C/O: Complaining Of; RLQ: Right Lower Quadrant; PMH: Past Medical History; O/E: On Examination; CT: Computed Tomography; Hb: Hemoglobin; MCV: Mean Corpuscular Volume; TIBC: Total Iron Binding Capacity; RDW: Red Cell Distribution Width; R/O: Rule Out; R/I: Rule In

Introduction and Case Report

10 year old female child visited our day care hospital on 7-26-2022 C/O 5 days history of diarrhea, 2 times vomiting, mild fever and abdominal pain, especially RLQ.

O/E generalized abdominal pain and rebound tenderness in RLQ with suspicion of acute appendicitis.

However, she was very anxious and alert and difficult to examine, so I consulted our surgeon - Dr Zuheir- who examined her and shared my concern.

Plan was agreed by both of us to do ultrasound abdomen (US) and blood investigations.

US showed ascites and intestinal wall thickness. however, appendix could not be visualized.

Inflammatory markers were elevated. That led us to plan to request CT abdomen to R/O or R/I appendicitis.

However, by reviewing her file we noticed that she had visited pediatric and general practitioner on many occasions for the last 10 months C/O non specific abdominal pain and 2 visits to check on anemia, Weight loss of 5kg was noticed in our medical records with unexplained non improving microcytic anemia.

She was treated, on the previous visits, symptomatically with pain killer and iron supplements without further investigations.

So, our preliminary diagnosis 7-26-2022 was either a case of acute abdomen or chronic condition with acute exacerbation and needs admission, close observation and further investigations including Ct abdomen.

She was referred to pediatric hospital - Jalilah - where she was admitted, Computed Tomography abdomen was done, followed by colonoscopy and biopsy.

Diagnosis was confirmed as Crohn’s and she was put on appropriate diet and medications.

In follow up visit to our hospital, she was doing well, eating well and no more complaint and gained weight again with improvement of her anemia.

Materials and Methods

- Detailed and thorough physical examination.
- Detailed check on previous medical history.
- US abdomen and CT abdomen (showed ascites and intestinal wall thickness and appendicitis was ruled out or in).
- Endoscopy and colonoscopy in Jalilah hospital: Cecum was fully cobblestoned with deep ulcers and pus. lumen of proximal ascending colon and cecum was narrowed with stricture close to ileocecal valve.
- Inflammatory markers including: CRP, ESR and calprotectin.

Results and Discussion

According to above mentioned clinical history at presentation on 26-7-2022, and not being able to identify appendix as well as by reviewing previous medical records, the decision was to do further investigation to firstly rule out acute abdomen case, and secondly to make a definite diagnosis for the chronic illness described above.

Radiology (CT abdomen) and colonoscopy followed by biopsy were the key for the final diagnosis, Crohn’s.

The case was challenging as each time the patient presented to the clinic, her status was average and the case was considered as acute abdominal spasm or acute enteritis and the anemia was attributed to poor diet and was not looked at seriously. While anemia was an important clue to look deeper and to consider the case for further investigations, anemia was microcytic, manifested with low hemoglobin, reduced MCV, increased platelet, increased RDWc, however, normal ferritin in most visits was an indicator that ferritin was increased due to ongoing inflammatory process.

Calprotectin in stool was positive and reached very high levels (> 1500 ug/gr, normal < 40) which is consistent with inflammatory bowel disease.

Indeed, the diagnosis was delayed due to not taking the recurrent symptoms seriously.

Laboratory results in 6 visits to our hospital between 2-20-2022 and 9-25-2022.

Date M-D-Y		Hb	MCV	Ferritin	TIBC	ESR	CRP	Platelet
	Normal references	11.5-15.5 gr/dl	77-99fl	7-10 ng/l	44-71.6 umol/l	0-20 mm/hour	0-5	150-400
9-25-2022		12.5	72.2				102	539
9-5-2022		11.9	73			41	43	437
8-10-2022		10	69.3			33	15.7	481
7-14-2022		7.8	59.6	86.56	27.6		161	694
4-6-2022		8.6	57.1	83.6	28		14.9	605
2-20-2022		9	55.3	36.95	40	37	126	765

Table 1

Conclusion

Anemia is common finding in Crohn's disease and a critical sign in children to investigate thoroughly.

It is prudent to consider recurrent abdominal pains in children as a chronic and serious case which needs investigation, especially when it is associated with positive findings such as anemia, positive calprotectin, weight loss, occult blood in stool or elevated inflammatory markers. inflammatory bowel disease is within deferential diagnosis for recurrent abdominal pain in children [1-6].

Conflict of Interest

We here by testify of having no conflict of interest.

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Volume 6 Issue 2 February 2023

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