

An unusual twist for a constipated adolescent.

A case presentation.



We present this case to highlight a rare but potentially devastating cause for the undifferentiated acute paediatric/adolescent abdomen.

To ensure patients are not wrongly diagnosed emergency practitioners should have this diagnosis at the back of their mind especially with recurrent presenters of self-resolving abdominal pain.

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Initial assessment.

Hx:

17 male was triaged with “lethargy”.

On further questioning he described non-specific lower abdominal pain. Constipated for 2/7 and had vomited a few times.

No urinary sx.

No significant PMHx

O/E

Vital signs within normal range

Non-distended soft abdomen.

Tender Left Lower quadrant on DEEP palpation.

Bowel sounds heard.

Ix:

FBC		UE		LFT		Urine		Other	
Hb	149	Na+	138	Billi		Blood	Neg	Lipase	311
WCC	10.1	K+	4.2	ALT	51	Nit	Neg	CRP	7
Platelets	179	Urea	6	ALP	11	Leucs	Neg		
MCV	92	Creat	62	GGT	36				

Consultation by
our institutions
surgeons

Where to next?

Indeterminate abdominal
exam findings, no cause
for the presenting
complaint of lethargy

Non-contrast
CT abdomen



CT Abdomen: Sigmoid volvulus



But he's 17, right?



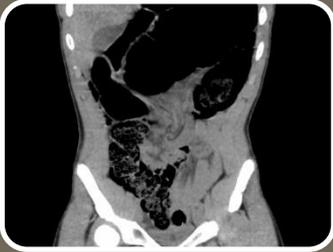
Our patient was found to have a sigmoid volvulus, a very rare occurrence in children and adolescents with around 90 cases reported in the literature since the 1940s. More classically it is a disease of the elderly where it accounts for 3-5% of large bowel obstructions in adults.



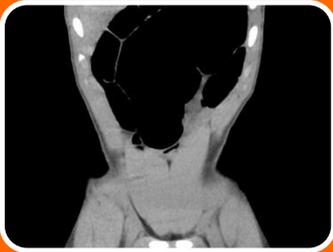
A volvulus results from axial twisting of the colon, in this case the sigmoid, on its own mesentery leading to a closed loop obstruction. Thus risking venous and arterial occlusion, ischaemia and perforation if left untreated.



In this young population, a pathologically long colonic mesentery has been cited as the most common associated factor. Other risk factors cited include Hirschsprung's disease, a narrow based mesocolon and chronic recumbency with development impairment. In one review 30% of patients had one of the conditions above.



Adolescents can present with acute abdominal cramps, abdominal distension, vomiting and constipation. Lethargy is a reliable cardinal symptom of intussusception but this has not been shown to be the case in other forms of bowel obstruction. There have been no reports of lethargy in the previous case reports of adolescent SV.



There is another spectrum of CHRONIC RESOLVING abdominal pains whereby spontaneous resolution of the volvulus can occur. This may lead to inappropriate treatments for erroneous diagnoses such as irritable bowel syndrome . This was the case of 40% of patients in the review by Salas et al.



An abdominal XR can be diagnostic if it shows the single U-shaped sigmoid loops from a proximal obstruction. However in children the gas pattern is often non-diagnostic and not helpful in differentiating from other diagnoses.



A barium enema has historically been relied upon as a diagnostic and concurrently therapeutic modality. There is now increasing utilization of CT scanning in the ED obviating the need for further imaging thus the patient can proceed to non-surgical reduction of volvulus prior to elective resection of the effected bowel.

Take home message.

Emergency departments frequently attend to children and adolescents with acute abdominal pain with a plethora of associated symptoms. It can be difficult for the emergency clinician to piece it all together especially when examination findings are indeterminate.

Lethargy appeared to be the predominating symptom in our case. The presenting symptom complex was seen to be similar with Intussusception, where lethargy can occasionally be the only presenting cardinal symptom.

We must always keep in the back of our mind though that occasionally you look up on hearing galloping hooves to see Zebras charging at you.

Our patient

He required two rigid and one flexible sigmoidoscopy to decompress this volvulus. A repeat presentation 2 weeks later required the same conservative mx. The following month he underwent elective laparoscopic anterior resection. Histology showed mild mucosal changes suggestive of ischaemic colitis.

Following an unremarkable recovery he continues to do well

References:

- 1) Salas et al. Sigmoid Volvulus in Children and adolescents. *J Am Coll Surg*. 2000 Jun;190(6):717-23
- 2) Ton et al. Recurrent Sigmoid volvulus in a sixteen-year-old boy. A case report and review of the literature. *Journal of pediatric surgery*. Vol 39, Sep 2004 1434-1436
- 3) Sliddell et al. Sigmoid Volvulus in three College-Age Teenagers. Letter to editor *J Clin Gastroenterol* Volume 38, Number 10, November/December 2004
- 4) A Surprising Twist to an Old Problem: Sigmoid Volvulus in a 19-Year-Old Man Salinas et al *The American Surgeon*; Mar 2007; 73, 3; ProQuest pg. 284