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Angiodysplasia of colon in a seven-year-old boy: A rare cause of intestinal bleeding

Sir,
We recently came across a rare, interesting but important cause of lower gastrointestinal (GI) bleeding in a pediatric patient.

A seven-year-old boy presented with history of passage of blood in stools for the last two years. There was no history of abdominal pain or mass, altered bowel habits or epistaxis. He was referred from a private hospital to us for management.

Physical examination was normal except for moderate pallor. Laboratory investigations revealed hemoglobin of 7.2 g/dl. The platelet count was normal and no bleeding diathesis was found. Colonoscopy showed nonspecific vascular alterations like dilated, congested vessels in the descending and sigmoid colon. The patient was taken up for a diagnostic exploratory laparotomy, which revealed abnormal dilated vessels involving lower descending and sigmoid colon with small petechial spots on their serosal surface. Surgical resection of the involved segment with end-to-end anastomosis was performed and the specimen was sent for pathologic examination.

The excised segment of large intestine showed multiple areas of focal serosal hemorrhages. Luminal surface showed focally edematous mucosa with multiple dilated and congested vessels [Figure 1, inset].

Multiple sections from the intestine showed unremarkable epithelium. Numerous dilated, tortuous and thin-walled vascular channels were noted in the mucosa, submucosa as well as serosa [Figure 1], with multiple areas of hemorrhages. Thus, a final diagnosis of vascular ectasia or angiodysplasia involving lower descending and sigmoid colon was rendered. The patient has been doing well two years after surgery.

Angiodysplasia or vascular ectasia of colon is recognized as an important cause of lower gastro-intestinal bleeding in the elderly.\(^1\) It usually involves the caecum and right colon in adults.\(^1\) Very few pediatric cases of angiodysplasia are present in the English literature.\(^2\) In this age group, left hemicolon is more commonly affected. The age of reported cases in children ranged from newborn to 15 years, males being affected more commonly.\(^2\)

Diagnostic modalities employed in cases of angiodysplasia include colonoscopy, selective visceral angiography and operative angiography, with variable success rates. The most important investigation for diagnosis of angiodysplasia is angiography or arteriography, which locates and delineates the lesion.\(^1\)

Though surgical resection is advocated as the first-line therapeutic measure, bipolar electrocoagulation and vasopressin infusion or gel foam embolization have been tried to control bleeding.\(^3\) However, the latter measures usually lead to late recurrences of bleeding.

The pathogenesis of angiodysplasia in adults is postulated to be the chronic partial intermittent obstruction of the submucosal

![Figure 1](image-url): Microphotograph of colon displaying numerous congested blood vessels of various calibers in submucosa and serosa (H and E, x40). Inset shows cut section of colon with numerous dilated and congested blood vessels in submucosa (arrows)
veins due to chronic constipation, accounting for the right-sided predilection in the elderly.[4] However, the pathogenesis in children appears to be different considering the left-sided predominance of these lesions in children.[2]

Since lesions like anal fissure, necrotizing enterocolitis, intussusception, polyps and Meckel’s diverticulum are commoner, angiodysplasia is not considered as a cause of GI bleed in children and a delay in diagnosis has been reported.[2] This is also true in our patient whose diagnosis was delayed for two years after the onset of symptoms. This delay may lead to a fatal outcome in children, if the bleeding increases in severity, as reported in the literature in occasional cases.[5]

Thus, this report highlights that angiodysplasia is a rare but important cause of recurrent intestinal bleeding in children and should be kept in mind as a diagnostic possibility. Early diagnosis of this rare lesion is important to avoid a possible fatal outcome and thus both the pediatrician and the pathologist should be aware of this lesion as a rare cause of intestinal bleeding in children.

References