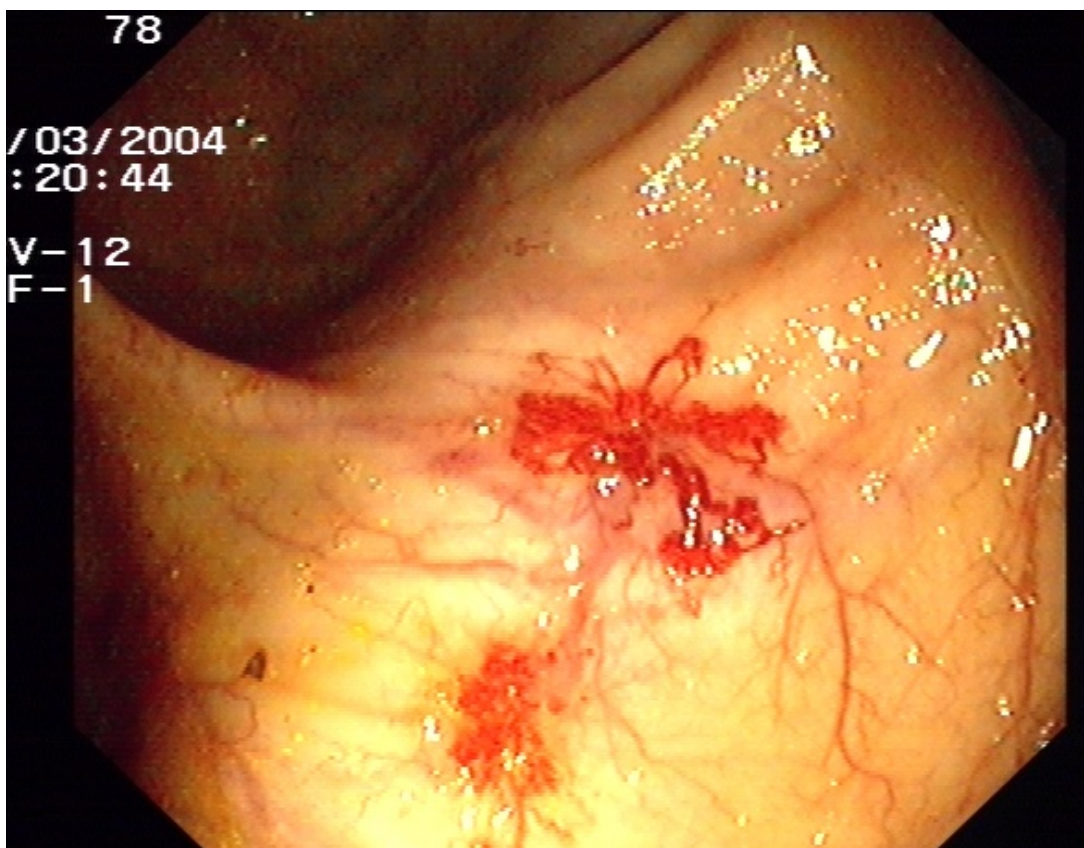


## Angiodysplasia — Symptoms and Treatment

[See online here](#)

**Angiodysplasia describes abnormal vascular malformations found in the gastrointestinal (GI) tract, especially in the cecum and right colon. These malformations are prone to bleed and may be responsible for painless hematochezia, melena, and concomitant anemia. Diagnosis can be made by direct visualization during endoscopy or angiography. Treatment consists of endoscopic interventions, including embolization and coagulation, antifibrinolytic medications and surgery as a last resort.**

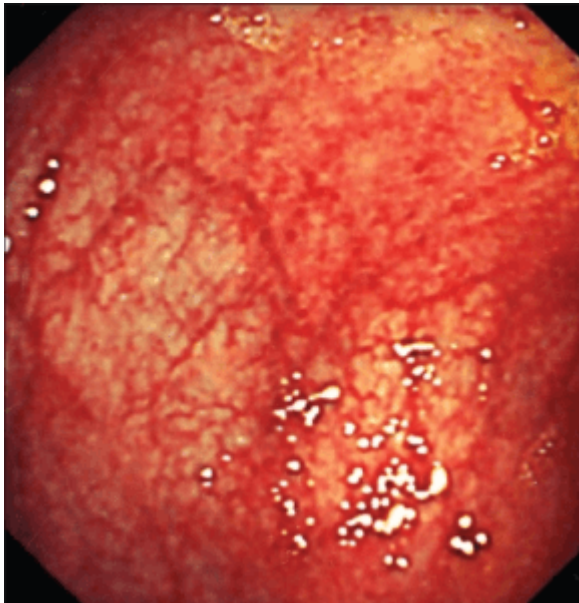


### Overview

Angiodysplasia describes vascular malformations found in the gastrointestinal (GI) tract, especially in the cecum and the right colon. These malformations are prone to bleeding and may be responsible for painless hematochezia, melena, and concomitant anemia. Diagnosis can be made by direct visualization during endoscopy or angiography. Treatment consists of endoscopic interventions including embolization, coagulation, antifibrinolytic medications, and surgery as a last resort.

# Definition of Angiodysplasia

## Angiodysplasia – Abnormal Vascular Formations



[Image](#): "Diffuse bleeding from tiny angiodysplastic lesions over the sigmoid colon" by openi. License: [CC-BY 2.0](#)

Angiodysplasia is a term used to define vascular malformations found in the bowel. These malformations are usually found in the ascending [colon](#) and the cecum. The bleeding can be minimal or quite severe, resulting in anemia. Angiodysplasia differs from arteriovenous malformations (AVM). The latter are usually large and solitary while angiodysplasia lesions are often present as multiple small lesions.

## Epidemiology of Angiodysplasia

### Spread of Angiodysplasia

Angiodysplasia is one of the most common vascular malformations of the GI tract and the second most common source of lower GI bleeding after diverticulosis. Angiodysplasia is most often found in the elderly, specifically those over 60 years. Asymptomatic angiodysplasia is seen in 1% of patients over 50 years. There is no difference between the sexes or the different races.

## Etiology of Angiodysplasia

### Causes of Angiodysplasia

The exact cause of angiodysplasia is unknown. The foremost theory involves the progressive degeneration of small submucosal vasculature in the GI tract that accumulates with age. Risk factors include heart disease ([aortic stenosis](#)), renal disease and coagulopathy.

# Pathology and Pathophysiology of Angiodysplasia

Angiodysplasia lesions are most frequently found in the cecum and the right colon, but they can also be found in the [stomach](#) and the [small intestine](#). The exact cause of GI angiodysplasia is unknown. Chronic venous obstruction may play a role.

During the normal functioning of the large intestine, the walls become distended, especially in the right colon with the largest lumen. During times of heavy load, the venous outflow from the submucosa may become transiently obstructed. This process is repeated for several years. Consequently, the precapillary arterioles lose their ability to regulate blood pressure and the angiodysplasia malformation occurs. This theory explains why they are most commonly found in the elderly population.

## Symptoms of Angiodysplasia

### Signs of Angiodysplasia

Many patients are asymptomatic with the diagnosis made during a screening colonoscopy. The diagnosis made during a screening colonoscopy reveals that many patients are asymptomatic and will present with a transient [GI bleed](#). Melena (dark blood) is an indication of an upper GI bleed while hematochezia may indicate a lower GI bleed. Patients with aggressive bleeding may also suffer from iron deficiency anemia with symptoms of lethargy, weakness, fatigue, and malaise.

## Diagnosis of Angiodysplasia



[Image](#): "Schematic Overview of Colonoscopy Procedure" by Euchiasmus. License: Public Domain

Asymptomatic angiodysplasia of the intestines is ignored. If found during a routine colonoscopy, they are evaluated during future colonoscopies. Only actively bleeding lesions are treated. As with all GI bleeds, the first step is to determine if the bleed is an upper bleed (peripheral to the ligament of Treitz) or inferior bleed (distal to the ligament of Treitz).

- Upper bleeds often present with hematemesis, but may also show melena.
- A lower GI bleed will present with melena and diarrhea (blood acts as an isotonic laxative) or hematochezia.

Once a rough estimation of the location of the bleed is determined and the patient is stabilized, a colonoscopy is performed to visualize the colon for bleeds or abnormalities. Severe bleeds may prevent colonoscopy. If the bleed remains elusive, a mesenteric angiography, or radionuclide scan, will be used to determine its location. Histology is not useful when diagnosing angiodysplasia.

## Differential Diagnoses of Angiodysplasia

### Clinical Pictures Similar to Angiodysplasia

- [Diverticulosis](#)
- [Hemorrhoids](#)
- [Colon cancer](#)
- Rectal cancer

## Therapy of Angiodysplasia

### Treatment of Angiodysplasia



[Image](#): "Angiodysplasia in the Stomach" by Joachim Gunta.  
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Once the angiodysplasia lesion is found, it must be treated to stop active bleeding and prevent future bleeding. The preferred treatment is endoscopic obliteration with the heat probe, laser photocoagulation or argon plasma coagulation. Additionally, transarterial embolization is a well-tolerated alternative. These techniques are accompanied by the risk of re-bleeding. Resection is the definitive treatment for angiodysplasia. Right hemicolectomy is the next level of treatment after endoscopic obliteration fails, but even patients treated with this therapy may develop an additional lesion and start bleeding again.

# Progression and Prognosis of Angiodysplasia

Angiodysplasia lesions are often asymptomatic. Of those that bleed, 90% lesions spontaneously cease bleeding without intervention. Large bleeds may lead to hemodynamic instability and anemia.

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