

CASE REPORTS

Out of the Ordinary: The Overlap of Common and Critical in a Young Female with Anemia

Aira Martin, M.D.¹, Anuj Sharma, M.D.¹

¹ Family Medicine, Baylor Scott & White Health

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We present a case of iron deficiency anemia in a premenopausal woman. The combination of her premenopausal status and self-reported menorrhagia could have led clinicians toward anchoring bias, potentially overlooking alternative etiologies.

The proportion of colorectal cancer cases has increased from 11% in 1995 to 20% in 2019 among patients younger than 55 years of age (Ref. 1), underscoring the importance of investigating gastrointestinal malignancy as a potential cause of iron deficiency anemia (IDA) in younger patients. Specifically, premenopausal women present a unique diagnostic challenge because menorrhagia is often assumed to be the source of IDA. IDA in young women is frequently considered normal (Ref. 2) and may not immediately trigger concern for alternative diagnoses. There have been studies exploring the relationship between IDA and gastrointestinal lesions. GI evaluation may be warranted in premenopausal IDA, beginning first with upper endoscopy.

There is agreement that postmenopausal females deserve GI workup in the presence of iron deficiency anemia. Workup for premenopausal women with IDA remains controversial. Current American Gastroenterological Association (AGA) guidelines recommend bidirectional endoscopy rather than empiric iron therapy alone for premenopausal patients presenting with iron deficiency anemia, but leaves room for individualization, especially with progressively younger age.

The workup should also consider evaluation for helicobacter pylori and celiac disease. If the initial workup including bidirectional endoscopy does not find a source of bleeding, the AGA recommends iron supplementation and watchful waiting before pursuing investigation of rare small bowel disease bleeding sources.

This case underscores the necessity of considering alternative and serious causes of anemia, including gastrointestinal malignancy, in premenopausal women with additional risk factors.

Introduction

Iron deficiency anemia (IDA) is a common laboratory finding in premenopausal women, and menorrhagia is frequently prioritized as the presumed etiology, while more serious conditions fall lower on the differential diagnosis. However, the epidemiology of early-onset colorectal cancer warrants reconsideration of this approach. We present a case of a premenopausal woman with heavy menstrual bleeding, fatigue, dyspnea, weight loss, and rectal bleeding found to have IDA, but also serious gastrointestinal sources of gastrointestinal (GI) bleeding.

Case

This patient is a 31-year-old female patient who initially presented to an outside facility with complaints of progressive dyspnea and fatigue. She was subsequently sent to another emergency department for higher level of care. One day prior to presentation, she had noticed her skin was paler than usual and she had felt faint.

Additional symptoms included a headache for which she had been taking Ibuprofen, 800mg three times a day, for the previous three days. She also reported heavy menstrual bleeding, using about one full box of tampons during her five days of bleeding. She reported a 20-pound weight loss in the previous three months, which she attributed to an improved diet and increased exercise. She noted blood in her stool and constipation for a few months prior to presentation which was evaluated at an outside ED. There, she reported her hemoglobin was around 9. She was told to establish with a primary care physician, which she had not yet completed. Family history was notable for breast and uterine cancer, but not GI malignancy.

Vital signs were notable for tachycardia. On examination, the patient appeared pale, but the rest of her physical exam was unremarkable. Lab work was most notable for a hemoglobin of 4.7 with an MCV of 68.8. Computerized tomography of the abdomen and pelvis was notable for numerous enlarged right iliac and retroperitoneal lymph nodes, concerning for metastatic disease or lymphoma. Gastroenterology was consulted and bidirectional endoscopy was completed, revealing a duodenal mass, a circumferential mass in the transverse colon, and a 6–7mm polyp in the sigmoid colon.

Biopsy of the duodenal mass and transverse colonic mass revealed moderately differentiated adenocarcinoma. Biopsy of the sigmoid colon polyp revealed tubular adenoma. Genetic testing revealed a MUTYH heterozygote mutation, indicating an increased baseline risk for colorectal cancer.

Discussion

In this case of iron deficiency anemia, evaluation proved challenging, as the patient reported a history of menorrhagia. However, it remains unclear how much detail she was able to provide at her initial presentation, since she was first seen outside our hospital system. Still, the combination of her premenopausal status and self-reported menorrhagia could have led clinicians toward anchoring bias, potentially overlooking alternative etiologies. Her concurrent intentional weight loss further obscured the clinical picture.

The proportion of colorectal cancer cases has increased from 11% in 1995 to 20% in 2019 among patients younger than 55 years of age,¹ underscoring the importance of investigating gastrointestinal malignancy as a potential cause of iron deficiency anemia (IDA) in younger patients. Specifically, premenopausal women present a unique diagnostic challenge because menorrhagia is often assumed to be the source of IDA. IDA in young women is frequently considered normal² and may not immediately trigger concern for alternative diagnoses. There have been studies exploring the relationship between IDA and gastrointestinal lesions. One study³ assessed the utility of working up IDA with bidirectional endoscopy in the asymptomatic premenopausal female population. The results showed that greater than 50% of the patients were found to have a gastrointestinal source of IDA, most commonly in the upper GI tract. This suggests GI evaluation may be warranted in premenopausal IDA, beginning first with upper endoscopy. Another study⁴ found similar results, showing that premenopausal female patients with IDA who underwent advanced imaging were more likely to have upper gastrointestinal lesions, specifically *Helicobacter pylori* gastritis and celiac disease. Another study suggests that using gastrointestinal symptoms,⁵ regardless of IDA status, as a guide for advanced diagnostic testing may improve detection rates for GI malignancy.

There is agreement that postmenopausal females deserve GI workup in the presence of iron deficiency anemia.⁶ Workup for premenopausal women with IDA does have some controversy (Ref. 6). Current American Gastroenterological Association (AGA) guidelines recommend bidirectional endoscopy rather than empiric iron therapy alone for premenopausal patients presenting with iron deficiency anemia, but leaves room for individualization, especially with progressively younger age.⁶

The workup should also consider evaluation for *helicobacter pylori* and celiac disease. If the initial workup including bidirectional endoscopy does not find a source of bleeding, the AGA recommends iron supplementation and watchful waiting before pursuing investigation of rare small bowel disease bleeding sources.⁶

This case underscores the necessity of considering alternative and serious causes of anemia, including gastrointestinal malignancy, in premenopausal women with additional risk factors.

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