

Capillary haemangioma: a rare cause of iron-deficiency anaemia

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DESCRIPTION

A 56-year-old man was referred to the hospital for investigation of low Iron levels. A colonoscopy and oesophagogastroduodenoscopy (OGD) was organised. The OGD performed was unremarkable. Of note the colonoscopy performed showed a multi headed polyp with at least two stalks in the proximal transverse colon (**figure 1A**). The appearances were suspicious of a malignant source and biopsies were taken and the area tattooed. The patient did not bleed and as such there was no cause for concern at the time.

The patient was discussed at multidisciplinary team (MDT) and the decision was made for follow-up in clinic and consideration of resection. The patient went on to have a right hemicolectomy from which he recovered well (**figure 1B**).

Histological examination of the right colon showed a polypoid tumour within the ascending colon measuring 20×20×20 mm. The tumour was confined to the mucosa. The microscopy sections showed a vascular malformation with ulceration and granulation tissue on the luminal aspect (**figure 2**). This was found to be a capillary haemangioma with arteriovenous (AV) malformation in the colon.

Haemangiomas of the bowel are benign tumours which are exceedingly rare and account for 0.05% of all intestinal neoplasms. They are composed of mature vessels lined by a single layer of endothelium. The first case in the lower gastrointestinal (GI) tract was described in 1839 of an 18-year-old man who presented with painless haemorrhage from an anal haemangioma which after sutured ligation led to sloughing of the tumour and eventual resolution.¹

Lower GI tract haemangiomas are important as they have the potential for causing large volume haemorrhage. Additionally, patients may have vague symptoms such as abdominal pain, vomiting, fatigue, malaise and general weakness. Capillary haemangiomas can vary in size from a few

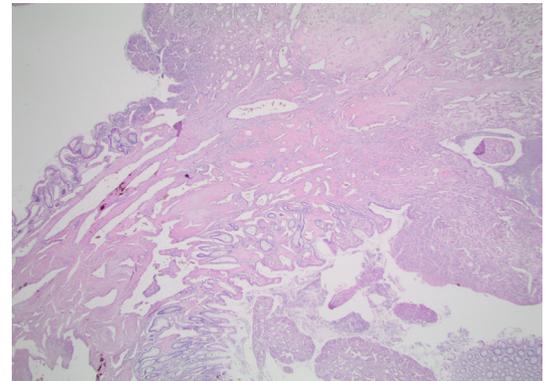


Figure 2 High power view of polyp stalk and head showing a vascular lesion. The vessels in the head of the polyp are small and thin walled, reminiscent of a capillary haemangioma. However, the vessels in the stalk are large and thick walled, reminiscent of an arteriovenous malformation.

millimetres to several centimetres in diameter and potentially easy to mistake for cancer.² Occasionally, they may be pedunculated but normally are level with the surface or slightly elevated.

Histologically, they are unencapsulated aggregates of closely packed, thin walled capillaries usually blood filled and lined by a flattened endothelium. Rupture of vessels may cause scarring and accounts for haemosiderin pigments which are occasionally found.²

Colorectal haemangiomas are congenital and arise from mesodermal tissue.¹ They grow through the proliferation of endothelial cells and impinge on the overlying mucosa as well as the muscularis. The different histological types reflect the abnormalities that occur at the different stages of stem cell development (capillary haemangiomas at the initial stage, cavernous at the second stage).¹ These haemangiomas are subject to erosion or ulceration into the abnormal vessels that can lead to profuse bleeding. This risk of profuse bleeding makes sampling them during colonoscopy extremely risk. Malignant transformation is rare.²

The treatment for gastrointestinal haemangioma consists of observation and follow-up if there are no overt symptoms. In those with symptoms of anaemia, red cell transfusion can be considered. The mainstay of medical management has consisted of corticosteroid use which is known to suppress the expression of vascular endothelial growth factor. There has also been a role found for interferon alpha which prevents endothelial cell migration with subsequent tumour regression.^{3,4} Surgical intervention is considered for



Figure 1 (A) Colonoscopy finding which showed a multi headed capillary haemangioma with at least two stalks in the proximal transverse colon. (B) Macroscopic specimen of the capillary haemangioma.



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those non-responders to medical care. The surgical method is depended on the location of the lesion.

Learning points

- ▶ Iron-deficiency anaemia may be due rarely to haemangiomas.
- ▶ Biopsies during colonoscopies of haemangiomas are fraught with risk.
- ▶ An increased awareness of haemangioma would reduce time to diagnosis and avoid inappropriate management.

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REFERENCES

- 1 Phillips B. *Surgical cases*. London: Med Gaz, 1839: 23: 514–7.
- 2 Cotran R, Kumar V, Collins T. *Robbins pathologic basis of disease*. Philadelphia: Saunders, 1999.
- 3 Bland KI, Abney HT, MacGregor AM, *et al*. Hemangiomas of the colon and anorectum: case report and a review of the literature. *Am Surg* 1974;40:626–35.
- 4 Seiff S, Deangelis D, Carter S. *Capillary hemangioma treatment & management: medical care, surgical care. Consultations [Online]*, 2016. <http://emedicine.medscape.com/article/1218805-treatment>

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