

# A Rare Case of Cervical Haemangioma: A Common Sign with an Uncommon Association

Telukuntla SAIRAM, Ashwini RATNAKAR, Manasi GOSAVI

## Abstract

Haemangiomas are benign vascular neoplasms characterised by larger, dysplastic vascular channels and aberrant development of endothelial cells. Although widespread throughout the body, they are uncommon in the female genital tract, especially in the cervix. In an extensive literature search, only approximately 60 cases of uterine cervical haemangiomas have been reported, making this condition a rare occurrence. They are often asymptomatic but can occasionally present with abnormal uterine bleeding, which is a common symptom associated with several other lesions affecting the uterine cervix. We report a case of a 44-year-old woman who presented with menorrhagia and severe anaemia. Imaging revealed features of adenomyosis and leiomyoma, and histopathology augmented with immunohistochemistry findings confirmed the incidental presence of a cervical haemangioma. This case highlights the importance of considering rare vascular lesions in the differential diagnosis of abnormal uterine bleeding.

**Keywords:** Cervical haemangioma, Histopathology, Immunohistochemistry, Abnormal uterine bleeding.

## Author Details:

KLE Academy of Higher Education and Research, Deemed-to-be-University, Belagavi, Karnataka, India.

## Correspondence:

Telukuntla Sairam  
sairamt819@gmail.com

## INTRODUCTION

The occurrence of haemangiomas in various parts of the body is fairly common. The development of this vascular neoplasm in the female reproductive system,

particularly in the uterine cervix, is considered rare; to our knowledge, only approximately 60 cases have been documented in the literature.<sup>1</sup> Cervical haemangiomas

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(CH) are often asymptomatic, with only one-third of the cases exhibiting any symptoms. The majority of cases are missed as the patients are asymptomatic due to the small size of the lesion, leading to the incidental diagnosis of such cases.<sup>1,2</sup> Patients present with menorrhagia, intermenstrual spotting, postcoital bleeding, infertility, dyspareunia; at times, may present clinically as a pelvic mass suggestive of a leiomyoma or even mimic endometriosis.<sup>3,4,5</sup> Here we report a case of a 44-year-old woman who presented with heavy menstrual bleeding with severe anaemia and imaging study suggestive of adenomyosis/leiomyoma. The histopathology, augmented by immunohistochemistry (IHC) findings, confirmed the incidental presence of a CH. This case highlights the importance of considering an uncommon association of CH - a vascular neoplasm presenting with common symptoms such as abnormal uterine bleeding associated with severe anaemia.

## CASE REPORT

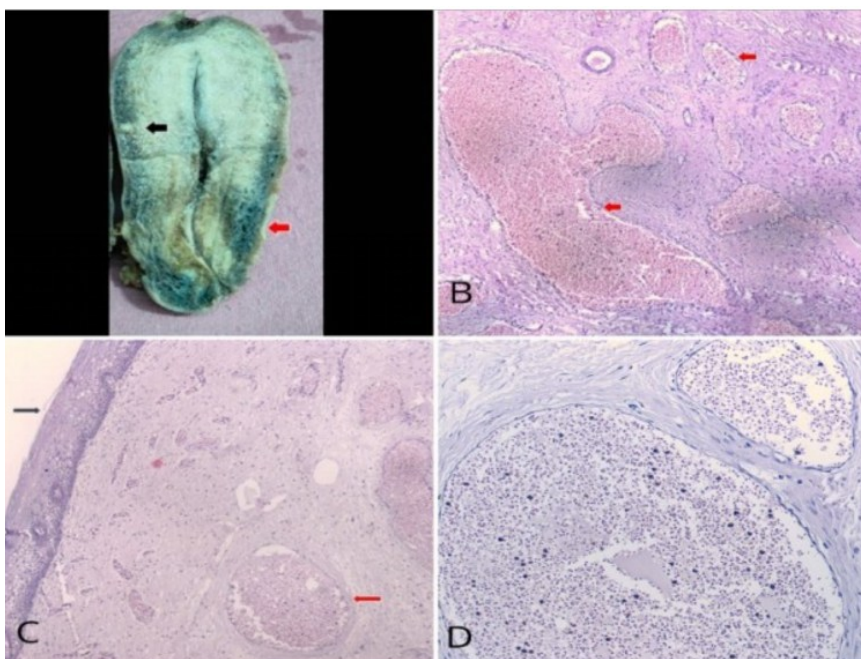
A 44-year-old woman presented with complaints of heavy menstrual bleeding for the past six months. The patient is married and has one child, delivered through normal vaginal delivery. She has no previous history of menstrual problems, gynaecological or obstetric surgeries, or any prior uterine instrumentation. There is no history of infertility, recurrent pregnancy loss, or complications during pregnancy. The family history was not significant for uterine or other gynaecological disor-

Laboratory Investigations revealed severe anaemia with a haemoglobin level of 5.6 g/dL (Normal range for non-pregnant adult woman: 12-16 gm/dL). The liver and renal profiles were normal, and the pregnancy test was negative. Imaging revealed heterogeneous myometrium with small hypoechoic areas in the posterior wall suggestive of leiomyoma. The patient underwent hysterectomy, and the specimen was sent to our pathology department for histopathological examination.

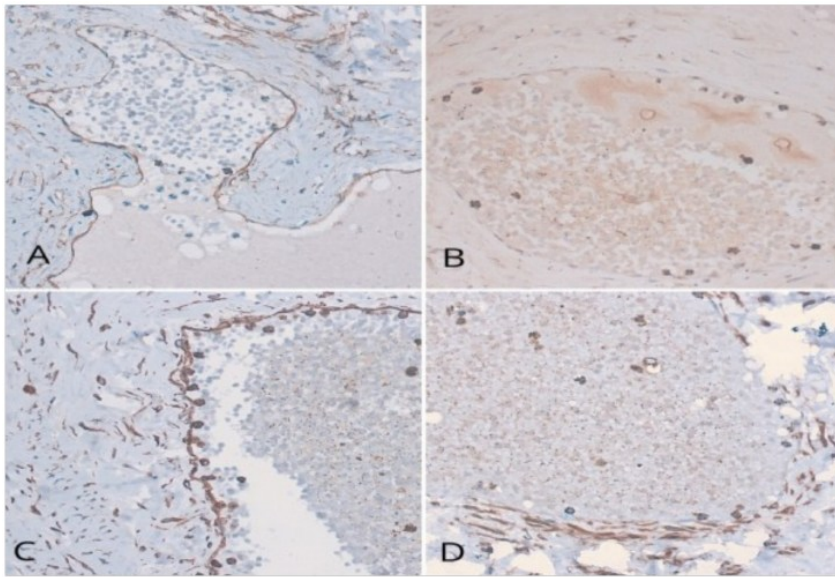
On gross examination uterus with cervix measured 10 x 7 x 5 cm. The external surface was unremarkable. Cut surface: Uterus showed diffuse areas of bluish discoloration of cervix along with a subserosal grey and white circumscribed mass with whorled appearance measuring 0.5 x 0.5 cm in the uterus. Microscopy revealed secretory phase endometrium and subserosal leiomyoma. The cervix showed numerous dilated, congested blood vessels of varying sizes lined by bland endothelial cells, separated by stroma, suggestive of a mixed hemangioma (cavernous and capillary types), which was supported by IHC findings (**Figures**).

## DISCUSSION

CH are benign vascular neoplasms first reported by Weed in 1948.<sup>1</sup> CH can be acquired or congenital. Congenital are associated with hereditary conditions like tuberous sclerosis, Maffucci syndrome, Kasabach-Merritt syndrome, Klippel-Trenaunay syndrome, and hereditary haemorrhagic telangiectasia.<sup>6</sup> Acquired



**Figure 1.** A) Uterus with cervix specimen - cut surface with subserosal leiomyoma (black arrow) and bluish discoloration of cervix (red arrow). B & C) Numerous dilated blood vessels of varying sizes filled with RBCs (red arrow) beneath the cervical epithelium (black arrow), H&E, 100X. D) Dilated blood vessels H&E (200x).



**Figure 2.** IHC images A) CD34 expression by vascular endothelial cells, 400x. B) Nuclear expression of ERG (Erythroblast transformation – specific regulated gene) by vascular endothelial cells 400x. C) Vimentin cytoplasmic expression of vimentin by vascular endothelial and stromal mesenchymal cells 400x. D) SMA (Smooth muscle actin) expression – Positive for pericytes and negative for endothelial cells 400x.

haemangioma is linked to both physical and hormonal changes, resulting in significant abnormal uterine bleeding. Its coexistence with lesions like leiomyoma can further obscure the diagnosis, as was also noted in the present case.<sup>7</sup>

Riggs *et al.* in 2003 documented a case of CH that persisted after pregnancy termination despite curettage and suturing, eventually necessitating a hysterectomy.<sup>8</sup> Djolai *et al.* in 2015 reported a case of CH associated with endocervical epithelial dysplasia.<sup>1</sup> Padmanabhan *et al.* reported a case of CH with focal nodular hyperplasia in the liver in a 34-year-old woman who had a history of using oral contraceptives.<sup>9</sup>

In our present case, the patient came only with complaints of abnormal uterine bleeding. There was no history of amenorrhoea/usage of oral contraceptives/evidence of cervical dysplasia/features suggestive of any associated syndromes.

The differential diagnosis includes other vascular proliferations like haemangioendothelioma, angiosarcoma, and squamous cell carcinoma of the cervix if there are any ulcerative lesions at the site. Haemangiomas are diagnosed basically on routine H&E sections and do not necessitate further confirmation by Immunohistochemistry examination; however, for academic purposes and their presence at unusual locations, we checked the expression of four markers, namely CD34, ERG (Erythroblast transformation–specific regulated gene), Vimentin, and SMA (Smooth muscle actin). CD34 accompanied by ERG expression suggested a

vascular origin of the tumour. Vimentin accompanied by SMA expression ruled out the other differentials. Our present case did not show any gross ulcerative lesions over the cervix, and histopathology, along with the IHC findings, confirmed the diagnosis of benign CH.

The management of CH depends on the clinical presentation. Spontaneous regression of the lesion has also been reported in a few studies.<sup>4</sup> Asymptomatic lesions may not require treatment, while symptomatic lesions can be managed with excision, laser therapy, or hysterectomy, depending on reproductive desire and bleeding severity. In the present case, given the patient's age, having completed her family, severe anaemia, and coexisting pathologies, a total hysterectomy was performed. Complications of CH include heavy menstrual bleeding leading to severe anaemia and infections. In the present case, heavy menstrual bleeding led to severe anaemia, compelling the patient to seek medical consultation. During the immediate follow-up, the haemoglobin rose to 10.5 gm/dl, and the patient recovered well.

## CONCLUSION

This case report underlines the importance of considering rare, uncommon occurrences of hemangioma of the cervix, in patients with common associations like unexplained heavy menstrual bleeding and leiomyoma, which can obscure the incidental diagnosis of the underlying lesion. Histopathological examination reinforced with IHC is confirmatory and the only way of making a

final diagnosis. Clinicians, pathologists, and treating consultants should maintain a high index of suspicion and be well informed about this condition for its early diagnosis and to prevent its complications.

#### Take Home Message

- The occurrence of haemangiomas in the uterine cervix is considered a rare occurrence.
- The present case highlights the importance of considering an uncommon association of cervical haemangioma - a vascular neoplasm presenting with common symptoms such as abnormal uterine bleeding associated with severe anaemia.
- Histopathological examination reinforced with immunohistochemistry examination is confirmatory and the only way of making a final diagnosis.
- A high index of suspicion should be maintained about cervical haemangioma for its early diagnosis and to prevent its complications.

#### Abbreviations

CH	Cervical haemangioma
IHC	Immunohistochemistry
ERG	Erythroblast transformation-specific regulated gene
SMA	Smooth muscle actin

#### Declarations

##### Patient Consent

Patient consent has been obtained.

##### Disclosure and Conflict of Interest

The authors declare that they have no conflicts of interest and no financial disclosures relevant to this case report.

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