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Introduction

Haemangioma of the cervix is an extremely rare benign lesion, and only a few sporadic cases have been reported.¹ Haemangiomas are benign tumors that originate from endothelial cells of the blood vessels, which represent multipotent cellular elements, or from pericytes located on the outer side of the blood vessel wall. These vascular lesions may be asymptomatic or may cause abnormal vaginal bleeding which may be, rarely, life threatening. The epithelium covering these haemangiomas is usually intact but, in exposed areas like the cervix and the vagina, traumatic ulceration of the overlying epithelium may create a lesion that tends to bleed on slight contact or trauma.²

We report a case of cervical haemangioma, a cause of postcoital bleeding, which was managed successfully by a conservative procedure.

Case report

A 26-year-old multiparous woman was referred to the colposcopy clinic with recurrent episodes of white discharge and postcoital bleeding. Her menstrual cycles had previously been regular, and of normal flow and duration. She had undergone two Caesarean sections, the last being 10 months before. There was no history of hormonal methods of contraception and she had not undergone cervical cancer screening in the past. She was treated by a gynaecologist for vaginitis, but her complaints of postcoital bleeding persisted. This was why she was referred to the colposcopy clinic for further evaluation.

A pelvic ultrasound examination performed two months prior to the referral revealed no pelvic pathology. Per speculum examination revealed an apparently normal cervix. On colposcopy, the squamocolumnar junction and the endocervical canal were visualised satisfactorily, and the transformation zone and contour were normal. Examination with green filter did not reveal any obviously abnormal vascular pattern. After application of acetic acid, there was aceto-whitening circumferentially, and the acetowhite area did not stain with Lugol's iodine. The above features raised the suspicion of cervical intraepithelial lesion, and a Modified Reid Colposcopic index (MRCI) score of 4 was assigned. Directed punch biopsies were taken, which resulted in excessive bleeding and necessitated the use of ball cautery. The histopathology revealed features suggestive of chronic cervicitis with no evidence of malignancy, hence immediate intervention was not planned.

Six weeks later, she returned after another episode of postcoital bleeding and a decision was made to perform a loop electrosurgical excision procedure (LEEP), as the histopathology did not corroborate with the colposcopy findings. LEEP also resulted in excessive blood loss, necessitating the use of ball cautery, application of Monsel's solution and tamponade. Pap smear and endocervical swab for human papillomavirus (HPV) testing by hybrid capture 2 assay were sampled prior to LEEP, and both were found to be negative. Histopathology showed mild hyperplasia of the ectocervical epithelium and the deeper stroma was highly vascular, consisting of blood vessels of varying sizes. The stromal cells were reported

as plump and prominent with absent mucin and there were no features suggestive of malignancy. The blood vessels were of varying size and the vessel walls were of variable thickness with oedematous stroma lined by endothelial cells, which was suggestive of capillary haemangioma of the cervix (Figures 1 and 2).

The patient was followed up six weeks post-procedure and, nine months later, the cervix was found to be well epithelialised and she had not had any further episodes of postcoital bleeding.

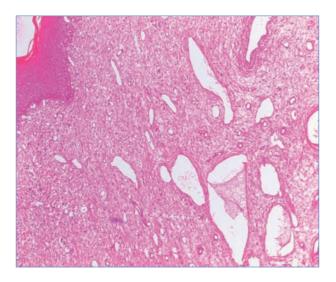


Figure 1: Mildly hyperkeratotic squamous mucosa, oedematous stroma with numerous vascular spaces, and vessels walls of variable thickness

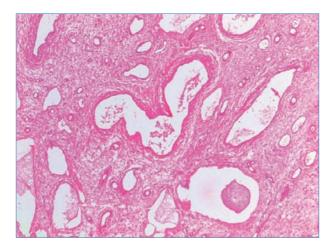


Figure 2: Blood vessels of varying sizes and vessel wall of variable thickness, with oedematous stroma

Discussion

Haemangiomas are benign vascular lesions of the uterus and cervix. They may be classified as capillary or cavernous haemangiomas, angiomyomas and haemangio-endotheliomas. The first report describing

a haemangioma of the cervix was by Weed in 1948.³ Though hemangiomas are believed to be congenital in origin, they may also develop in adults from developmental rests that have retained the potential for later proliferation.⁴ The development in adults may be associated with pregnancy and oral contraceptive pill use, thereby indicating a hormonal role.²

Bonetti et al hypothesised the possible involvement of oestrogen in the development of haemangiomas by the presence of estrogen receptors in the endothelial cells. In three cases, they found that all the tumours were immunoreactive for CD31, CD 34 and factor VIII-related antigen.⁵

The majority of haemangiomas are asymptomatic, because of their small size and the fact that they are discovered incidentally. Although the patients' ages vary from nine to 70 years, most of these vascular lesions occur during the second and third decades of life and parity does not seem to play a significant role.6 Thirtyfive per cent of reported cases are associated with abnormal vaginal bleeding, like postcoital bleeding or menometrorrahgia. These symptoms could also be due to cervicitis, particularly secondary to Chlamydia trachomatis infection. Hence, true haemangiomas must be differentiated from microvascular proliferations resulting from chronic infection.² Haemangiomas can also be mistakenly diagnosed as squamous cell carcinoma of the cervix, particularly when this condition presents as an ulcerative lesion.5

On topographic assessment of the cervix, port-wine or brownish discolouration may be present, which blanches on pressure. These lesions may be small and circumscribed or diffuse, and may also extend onto the vagina and vulva. Haemangiomas can also be detected incidentally during routine histopathological examination of the organ removed surgically, in the absence of a gross lesion. For the control of the con

Unlike the cases reported earlier, there was no surface abnormality in the present case, probably because the deeper stroma was highly vascular. However, it is difficult to explain postcoital bleeding in the present case, which usually occurs due to a breach in the surface epithelium overlying the haemangioma.

Pregnancy may stimulate the growth or aggravate the symptoms of an existing lesion, due to a combination of various hormonal changes. The likelihood of actual blood vessel growth or angiogenesis in pre-existing vascular anomalies is a possibility. A case was reported where a woman presented with intractable bleeding following termination of pregnancy and the bleeding continued despite curettage and suturing, ultimately resulting in hysterectomy. Padmanabhan et al reported a case of a 34-year-old woman who

presented with haemangioma of the cervix and focal nodular hyperplasia of the liver following the use of oral contraceptive pills.¹⁰

Of the two histological types reported in the literature, the more common is diffuse cavernous haemangioma. Cavernous haemangiomas show various-sized vessels, separated by smooth muscle and with a minimal amount of collagen-containing thrombi lined by endothelial cells. Capillary haemangiomas consist of small and clustered vascular channels lined with flat endothelial cells with intervening fibrous tissue. Haemangiomas must be differentiated from reactive granulation tissue, which would contain inflammatory cells and fibrin, and also from angiosarcomas (a malignant variant of haemangioma), which exhibit increased mitotic activity and atypia.⁵

Transvaginal colour Doppler and magnetic resonance imaging can be used for clinical diagnosis and therapeutic assessment of vascular tumours of the female genital tract.⁴ A literature search revealed that a surgical excision remains the curative treatment in most cases, and conservative therapy, such as sclerosing agents, cryotherapy, carbon dioxide laser and LEEP, may alternatively be used.⁵ Transcatheter arterial embolisation, after delivery, has been reported in the treatment of rapidly growing vaginal haemangioma.¹¹ Although hysterectomy, as a primary mode of therapy for cases of haemangioma of the cervix presenting with vaginal bleeding, has been reported by Powell et al, most were performed because the lesion was suspected to be malignant.¹²

Conclusion

Cervical haemangiomas are generally asymptomatic but can cause vaginal bleeding, and hence should be included in the differential diagnosis of patients with abnormal vaginal bleeding. Conservative procedures like LEEP can be undertaken to avoid unnecessary hysterectomy.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

Anita Dalal performed the colposcopy, Geeta Durdi reviewed the literature, Bhavana Sherigar performed

the LEEP and assisted with writing the manuscript, Shobhana Patted reviewed the literature and worked up the case, and Prakash Malur performed the histological evaluation of the biopsy specimen. All authors read and approved the final manuscript.

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