

## A cavernous haemangioma of the uterine cervix during pregnancy

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**Keywords:** cavernous haemangioma, uterine cervix, pregnancy, cervical fibroid

### Abstract

Cavernous haemangioma of the uterine cervix is extremely rare. Fewer than 50 have been reported cases to date. A nulliparous term woman presented with a sensation of "something coming out" of her introitus. The mass was found to be large, 8 cm in diameter, and arising from the uterine cervix. It was clinically diagnosed as a cervical fibroid. The mass was surgically resected and was sent for histopathological study. Grossly, it was a well-circumscribed, greyish-brown mass, measuring 6 x 7 x 8 cm. From the biopsy, the diagnosis that was made was cervical cavernous haemangioma. The patient later delivered a child by Caesarean section. Although cavernous haemangioma of the uterine cervix in pregnancy is a rare entity, it should be kept in mind as a differential diagnosis by clinicians.

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South Afr J Gynaecol Oncol 2012;4(2):63-65

### Introduction

The incidence of haemangioma in different parts of the body is quite common. The occurrence of this vascular lesion in the female genital tract, particularly in the uterine cervix, is rare.<sup>1</sup> Due to their small size and asymptomatic nature, the majority of detected haemangiomas are incidental. They may present with abnormal vaginal bleeding.<sup>2</sup> Affected gravidas often have an uneventful pregnancy, labour and delivery.<sup>3-5</sup> In asymptomatic women of child-bearing age, management is local excision to preserve the uterus.<sup>4</sup> Bleeding, while usually responsive to conservative surgical management, may require a hysterectomy.<sup>6</sup> In this article, we describe an asymptomatic haemangioma of the cervix which was clinically diagnosed as a cervical fibroid in a term pregnant woman. The haemangioma was managed by local surgical resection.

### Case report

A 27-year-old nullipara, at 34 weeks gestation, complained of a sensation of "something coming out" of her introitus. Except for her term pregnancy, her

past history was normal. On general examination, the patient was found to be pale, weak and hypotensive. A speculum examination revealed a large, well-circumscribed mass of approximately 8 cm in diameter, extending from the posterior lip of the uterine cervix, and bulging out through the introitus. Clinically, it was diagnosed to be a cervical fibroid.

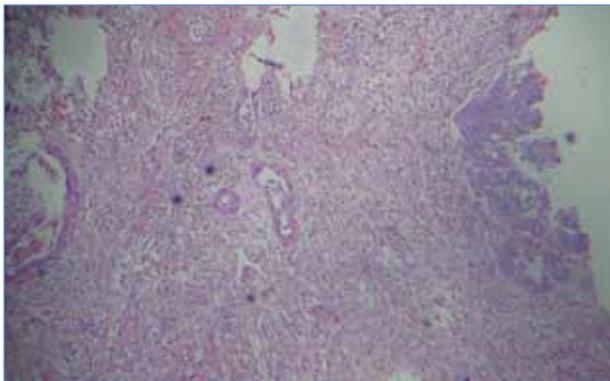
Ultrasound (US) of the abdomen revealed a single intrauterine live foetus of 34 ± 2 weeks gestation in the cephalic position. US of the pelvis showed a large hypoechoic mass of 7 cm in the vagina, attached to the cervix. A full blood count revealed haemoglobin of 10 g/dl and neutrophilic leucocytosis, with the platelet count and coagulation profile within the normal limits. The mass was surgically resected and sent for histopathological examination.

On gross examination, the mass was well circumscribed and greyish-brown. It measured 6 x 7 x 8 cm. Cut-section revealed a soft, homogenous greyish-brown surface interspersed with a few white fibrous strands (Figure 1). On histopathological examination, there was metaplasia of squamous lining of the

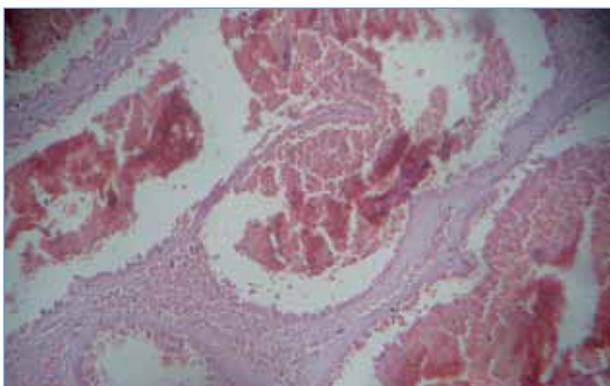
uterine cervix (Figure 2), with the presence of irregularly dilated blood vessels lined by a flattened endothelium separated by stroma containing a few inflammatory cells (Figure 3). The final diagnosis that was made was cavernous haemangioma of the uterine cervix. The patient was followed-up and later



**Figure 1:** A well-circumscribed, greyish-brown gross mass, interspersed with a few white fibrous strands



**Figure 2:** Metaplasia of the cervical squamous epithelium, with underlying dilated blood vessels separated by connective tissue stroma (x 100, haematoxylin and eosin staining)



**Figure 3:** Large blood-filled vascular spaces separated by stroma (x 400, haematoxylin and eosin staining)

delivered a term baby through Caesarean section. The latter was performed due to foetal distress and to obtain a good neonatal outcome.

## Discussion

Usually, venous malformations occur on the head, neck, extremities and trunk. Haemangioma is a ubiquitous benign vascular tumour that rarely involves the female genital tract.<sup>1</sup> To date, fewer than 50 haemangiomas have been reported that have arisen in the uterine cervix.<sup>1</sup> Although they can occur in any age group, most of these vascular lesions occur in the second and third decades of life.<sup>7</sup> Most cervical haemangiomas are asymptomatic and have an incidental finding. Of 41 reported cases, one third had abnormal bleeding, usually in the form of menometrorrhagia or postcoital spotting.<sup>3,4</sup>

The hypothesis about the possible origin of this tumour of the uterine cervix is from the embryonic sequestration of mesodermal rests<sup>1</sup> and acquired forms, associated with previous pelvic surgery, endometrial curettage or ingestion of diethylstilbesterol.<sup>8</sup> Even if the association of cervical haemangioma with chronic cervicitis has been reported, this lesion must be differentiated from increased blood vessels in granulation tissue resulting from chronic infection.<sup>9</sup>

Haemangiomas induced by pregnancy regress after delivery. Changes during pregnancy due to hormonal influence can result in the risk of obstetric complications.<sup>1</sup>

High-serum oestradiol doubles the growth rate of vascular endothelium in vitro.<sup>10</sup> The risk of haemorrhage may increase, particularly when the growth is associated with infection, ulceration or trauma. But, in our case, the patient complained of "something coming out" of the introitus, similar to a dragging sensation. This was surgically excised.

Cavernous haemangiomas should be differentiated from reactive granulation tissue. The absence of concomitant inflammatory cells or fibrin in the histology excludes the inflammatory nature of the lesions. No atypia was observed in the endothelial cells, with the absence of mitotic figures excluding angiosarcoma. The immunohistochemistry stain was positive for CD31 and CD34, together with focal positivity for factor VIII-related antigen.<sup>11</sup> The differential diagnosis also includes gestational trophoblastic neoplasia, like choriocarcinoma, which is soft, haemorrhagic and nodular. Microscopically, the absence of a biphasic pattern comprising both cytotrophoblasts and syncytiotrophoblasts, together with necrosis and haemorrhage, rules out the diagnosis of choriocarcinoma.

All the haemangiomas reported by Ahern and Allen were benign.<sup>6</sup> This supports conservative treatment with close follow-up.<sup>6</sup> Conservative measures used are local excision, conisation, cautery, radiation, suture ligation, cryotherapy, systemic and local steroid therapy, laser excision and photocoagulation.<sup>12</sup> Although Powel et al found hysterectomy to be the primary mode of treatment in 38% of cases until 1991,<sup>12</sup> in the last decade, hysterectomy has been limited to cases in which conservative management has failed. Three reports describe cases that were managed expectantly during primigravida pregnancy.<sup>4,5</sup> Bleeding did not occur, even though the lesion grew during the gestation. Caesarean section was carried out in one case, as the cervix was obstructed by the lesion.<sup>5</sup> In our case, the primigravida was managed conservatively by local excision. The patient responded well to it and delivered a child by Caesarean section later, following the development of foetal distress.

Clinicians should keep in mind that a cervical lesion that is associated with pregnancy may not be a cervical fibroid. The differential diagnosis should be broadened to include cavernous haemangioma. Unless a complication like active bleeding occurs, for which conservative management may not be helpful, the entity can be managed with local conservative treatment.

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