Vaginal varices in post-menopausal woman: A rare entity

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Abstract
Post-menopausal bleeding occurs in 4-11% of post-menopausal women with the most common cause being endometrial atrophy followed by malignancies of genital tract. Vaginal varices are a rare cause and are usually seen in pregnant women. They are less common than vulval varicosities which occur in 2-4% of pregnancies. Other causes of vaginal varices are portal hypertension, pelvic congestion syndrome and Klippel-Trenaunay syndrome. Here we report a post-menopausal woman with vaginal varices without any evidence of liver disease nor pelvic congestion syndrome. A 71-year-old multipara presented with complaints of post-menopausal bleeding for 2 years. She gave typical history of passage of gush of fresh blood followed by spontaneous resolution within minutes. She had these episodes at an interval of 2 to 3 weeks for which she underwent total abdominal hysterectomy. There was no evidence of malignancy in histopathology. However, 7 months following surgery the symptoms recurred. On examination she was not pale and a pelvic examination was unremarkable except a 3*3 cm bluish swelling seen in the anterior vaginal wall. Ultrasound with doppler revealed increased vascularity around vagina. CT angiography was performed which showed a vaginal varix draining into left internal iliac vein. The patient was planned for embolization by transfemoral catheterization and feeding vessel was selectively embolized. Post-embolization the varix resolved, patient was discharged and is currently asymptomatic. Vaginal varices should be kept as a differential in post-menopausal bleeding especially when the discharge consists of fresh blood. Early recognition and treatment can also avoid unwanted hysterectomies.

Keywords: Vaginal varices; post-menopausal bleeding; embolization

Introduction
Post-menopausal bleeding occurs in 4-11% of postmenopausal women [1]. The most common causes are Endometrial polyp (37.7%), Endometrial atrophy (30.8%), Endometrial hyperplasia (14.5%), Endometrial carcinoma (6.6%) and Fibroids (6.2%) [2]. Vaginal varices are a rare cause of post-menopausal bleeding more commonly being seen in pregnant women. Non-menopregnancy related causes are portal hypertension, pelvic congestion syndrome and Klippel-Trenaunay syndrome [3]. Only 12 cases have been reported so far in literature. Ours is a first case report of vaginal varices causing post-menopausal bleeding without any of the above mentioned cause and one of the few being successfully treated with embolization. This case shows the importance of recognizing vaginal varices as a cause of post-menopausal bleeding in women with no risk factors.

Case Report
Patient is a 71 years old multipara who presented to our hospital with complaints of post-menopausal bleeding for two years. She gave typical history of passage of gush of fresh blood followed by spontaneous resolution within minutes and had these episodes at interval of 2 to 10 months. The episodes were unpredictable and resolved on its own. She had undergone a total abdominal hysterectomy for the same; 10 months. The episodes were unpredictable and resolved on its own. She had undergone a total abdominal hysterectomy for the same; 10 months after the onset of symptoms. However, the bleeding did not resolve after the surgery but in contrast the episodes became more frequent on examination, she did not have any signs of anaemia, was vitally stable and per abdomen findings were unremarkable. A local examination however revealed a bluish nodule of 3*3 cm bluish nodule in anterior vaginal wall (Figure 1). Per speculum and per vaginal examination was normal. Histopathology of the operated specimens revealed no malignancy. Initially a differential of gestational trophoblastic disease was considered however her Beta-HCG levels were normal. Ultrasound done revealed increased vascularity around the left vaginal wall.
CT angiography was done in PGI which showed revealed venous channels in vaginal wall with tributaries from left internal iliac vein with no arterial feeder or arterio-venous malformation (Figure 2). Patient was admitted and planned for endovascular glue or sclerosant injection. Under CT guidance left internal iliac artery was cannulated which revealed vaginal varix draining to left internal iliac vein. It was selectively embolized with coils and sodium tetradecyl sulfate. (Figure 3). Post embolization no further filling of varix was seen. Patient was observed for 24 hours and discharged. Currently she is 10 months post embolization and is asymptomatic.

**Discussion**

Only 12 cases of vaginal varices in non-pregnant women have been reported so far in literature. Of the 12 cases of vaginal varices reported in literature 11 occurred in patients with portal hypertension and one in patient with congenital arterio-venous malformation and tissue hypertrophy in left limb [4]. In 9 of the
12 cases patients had underwent hysterectomy, two had occurred in patients who had undergone radiation therapy for cervical neoplastic lesion and one patient had portal hypertension with spleno-ovarian shunt causing bleeding. Possible reason might be absence of uterine –venous plexus which results in shunting of blood directly to vaginal venous system causing massive congestion This can also explain the increased frequency of bleeding episodes after hysterectomy in present case. In a case of vaginal varices reported by Chuun et al. [3] the patient also had varicose veins and deep arterio-venous shunts in left leg which resolved after an arterio-venous fistula occlusion surgery. Other cases have been treated with TIPSS, vaginal suture ligation and transvenous balloon occlusion in another case report by Hoshida et al., [5] reported a 65 year old women with vaginal varix in right fornix CT guided balloon occlusion of left ovarian vein was done and ethanolamine oleate was injected. Post which patient was asymptomatic it was the first report case of treatment of recurrent vaginal varices by transvenous balloon obliteration. Our case report shows the successful treatment could be done with embolization and it could be considered as one of a treatment option. Vaginal varices can also cause acute bleeding which required immediate management with vaginal packing and tamponade. Definitive treatment options include vaginal band ligation, suture ligation and sclerotherapy Ours is a first reported case with no probable cause and treated with endovascular coiling and sclerotherapy. Currently patient has no bleeding episodes till now and on follow up. This case highlights that Vaginal varices should be considered as a differential of post-menopausal bleeding especially when there is history suggests of passage of gush of fresh blood. Early recognition can improve quality of life and prevent unwarranted hysterectomies.

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References

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