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Case Report

Enhanced myometrial vascularity in hysteroscopy in the elderly: a case report

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ABSTRACT

Sildenafil citrate (Viagra), a selective cGMP specific PDE5 inhibitor, widely used in erectile dysfunction in males, acts on vascular smooth muscle, especially corpus cavernosum. Authors detail a rare case report here, elderly 80-year-old woman, on sildenafil for coronary artery disease and pulmonary hypertension, with a small long standing FIGO 2-5 uterine fibroid, presenting with acute post-menopausal bleeding after 40 years of menopause, hysteroscopy showing enhanced myometrial vascularity and benign histopathology thereafter.

Keywords: Enhanced myometrial vascularity, Hysteroscopy, Postmenopausal bleeding, Viagra

INTRODUCTION

Sildenafil citrate, a selective cGMP specific PDE5 inhibitor, widely used in erectile dysfunction in males, acts on vascular smooth muscle, especially corpus cavernosum. It also causes decrease in systolic and diastolic blood pressure, hence predominantly used for its vasodilator activity in cardiovascular conditions, sildenafil also decreases elevated pulmonary vascular resistance in patients with pulmonary vascular disease. In the field of Gynaecology, Sildenafil, is used in subfertility treatment, for increasing endometrial receptivity by increasing uterine artery blood flow by decreasing vascular impedance and increasing endometrial thickness.[1] Authors detail a rare case report here, an elderly 80 year old woman, on sildenafil for coronary artery disease and pulmonary hypertension, with a small long standing FIGO 2-5 uterine fibroid, presenting with acute post-menopausal bleeding after 40 years of menopause, hysteroscopy showing enhanced myometrial vascularity and benign histopathology thereafter.

CASE REPORT

The patient was an 80-year-old woman, previously diagnosed type 2 diabetic and systemic hypertension for past 20 years on treatment and coronary artery disease for 7 years, coronary angiogram was done, prescribed clopidogrel 75/10 mg since then. Recently diagnosed with pulmonary artery hypertension, almost a year ago, was started on tab. Sildenafil citrate 25 mg BD. The patient presented to the OPD with acute post-menopausal bleeding.

The patient was admitted and thoroughly evaluated. Local cervical and vaginal causes were ruled out with speculum examination. Pap smear was negative for any intraepithelial malignancy. Routine blood parameters were within normal limits. ECG, 2D echo, USG abdomen, pelvis done. Clopidogrel was withheld due to vaginal bleeding.

Multidisciplinary approach sought involving the general physician, endocrinologist and cardiologist. The ultrasound of the abdomen and trans vaginal scan of pelvis showed bulky uterus with hypoechoic lesions in the endometrium and increased vascularity (Figure 1 and 2). MRI pelvis showed uterus 7×5.5 cm, ET- 4.4 mm, fibroid 4.5×4.7×4.4 cm (FIGO 2-5), pushing the endometrium to the right. Both ovaries were normal in size and appearance (Figure 3). Acute bleeding was treated with testosterone injection 25 mg, as endometrium was thin. Patient was

symptomatically better with testosterone and tranexamic acid and was discharged after 3 days after restarting clopidogrel.

Figure 1: TVS pelvis showing fluid in endometrial cavity.

Figure 2: TVS pelvis showing anterior wall (FIGO 2-5) fibroid.

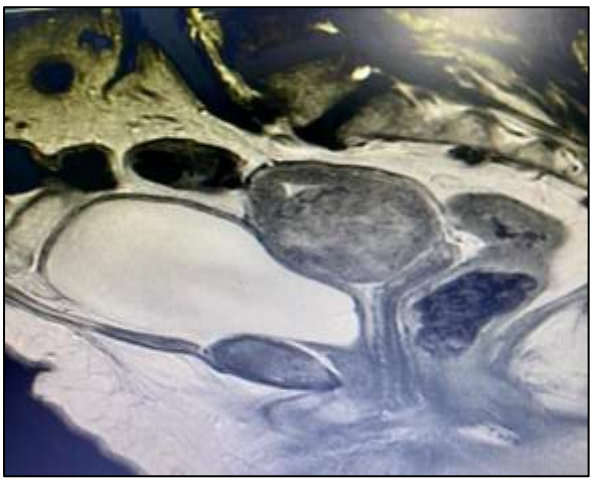

Figure 3: A close up of MRI pelvis showing fibroid uterus (FIGO 2-5) pushing the endometrium.

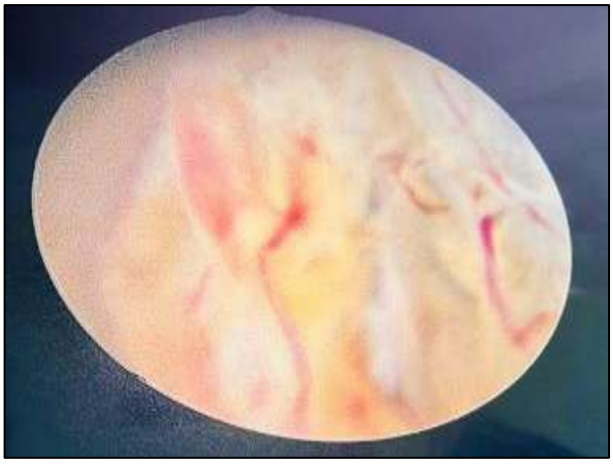

Figure 4: Hysteroscopy finding- submucosal part of the fibroid showing increased vascularity with feeding vessels.

However she was readmitted after two weeks, with heavy bleeding per vaginum (second episode), we proceeded with emergency hysteroscopy. Endometrial cavity thin, 4×3cm submucosal part of the hybrid fibroid visualised, with grossly increased vascularity, endometrial bed also visualised with increased vascularity with multiple feeding vessels (Figure 4). Endometrial curettage done and histopathology revealed benign basal endometrium, with no evidence of malignancy.

Patient was given injection testosterone 25 mg OD for 3 days and Tranexamic acid 250 mg BD. Sildenafil citrate was withheld and as patient was symptomatically better, she was discharged on clopidogrel alone. When she was asymptomatic for 3 months, restarted on Sildenafil in view of robust pulmonary artery hypertension, again she was readmitted with bleeding per vaginum for the third time, conservatively managed with testosterone and tranexamic acid. Any further episode of bleeding, the plan of management is for uterine artery embolization, as patient is at high risk for prolonged anesthesia, for hysterectomy to be attempted.

DISCUSSION

In normal post-menopausal women, studies have shown that due to physiological lowering of estrogen, colour Doppler of the uterine artery will show an increase of vascular impedance and decreased vascularity. This is probably attributable to a progressive increase in the amount of fibroblasts.[1] However, in post-menopausal women undergoing HRT with estrogen, colour Doppler showed decreased impedance and increased vascularity.[2] Similarly, in a clinical study by Pfizer, uterine and clitoral artery blood flow was studied with colour doppler after a single dose of 50 mg sildenafil, Sildenafil significantly reduced impedance in the uterine and clitoral arteries and increased vascularity, more than that of HRT.[2,3] The patient was an elderly woman who presented with acute post-menopausal bleeding, secondary to increased

endometrial vascularity due to Sildenafil. She was symptomatically better once Sildenafil was withheld. Post-menopausal bleeding due to sildenafil, cannot be controlled with estrogen or progesterone, as the defect is not in the endometrium, but lies in the systemic vascularity. Usually the endometrium remains thin, but the vascularity is increased. Conservative management with tranexamic acid or testosterones can be considered. Uterine artery embolization also is considered as next level treatment, if sildenafil treatment is inevitable.

Hence thorough examination by the gynaecologist should be made mandatory before starting sildenafil in women over 40 years of age. Clinical examination and USG pelvis with colour Doppler can be performed. If required, endometrial aspiration should be performed, to rule out malignancy in cases of thickened ET.[4,5] Sildenafil for cardiovascular or female erectile dysfunction ,should be avoided in high- risk patients and in any case of structural pathology of the uterus.[6]

CONCLUSION

Sildenafil citrate uses for any purpose, such as erectile dysfunction, cardiac or pulmonary disorders and subfertility, must be administered cautiously in women aged more than 40 years.

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