

## UTERINE MYOMA- A RARE CAUSE OF ILIAC VEIN THROMBOSIS

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### ABSTRACT

Uterine myoma is a common condition among women, which may very rarely be associated with pelvic venous thrombosis. This manuscript reports the case of a 39-year-old patient who presented with ischaemic leg due to iliac vein thrombosis secondary to extrinsic compression by a small sized uterine myoma. Considering the high prevalence of myoma in the population, it is advisable to specifically consider this possibility in the case of female patients with pulmonary embolism or pelvic or limb venous thrombosis.

**KEY WORDS:** Iliac Vein, Femoral Vein, Thrombosis, Etiology, Uterine Myoma

### INTRODUCTION

Venous thromboembolism is not uncommon and has different etiology or predisposing causes. Some of the main predisposing factors include, inherited or acquired, leading to thromboembolism include blood anti-coagulation agents deficiencies, hypercoagulability states, oral contraceptive use, hormone replacement therapy in post-menopausal women, immobilization due to pregnancy, trauma, cancer and major surgery<sup>1,2</sup>. Uterine myoma is a very rare cause of venous thromboembolism (VT). Due to this fact, only a few cases have been reported of venous embolism associated with uterine myoma and among these only three were associated with embolic events.<sup>1,3,4</sup>

Uterine leiomyoma is the most common benign pelvic tumor among women of more than 30 years of age. They are usually asymptomatic nonetheless some of its commonest acute complications are torsion, hemorrhage and urinary retention. Due to increases in size they can produce symptoms as a result of compression of the surrounding anatomic structures and may result in thrombosis of pelvic veins or embolism.<sup>5,6</sup> In such cases, hysterectomy is the standard treatment of choice however myomectomy can be considered as an alternate in patients who wants to preserve their fertility. In order to prevent further embolic incidence, anticoagulant agents alone or along with inferior vena cava filters can be used.<sup>5</sup>

### CASE REPORT

A 48 years old lady presented in emergency with 02 days complains of cold and numbness of the right lower limb. She was having difficulty in moving her leg due to dragging

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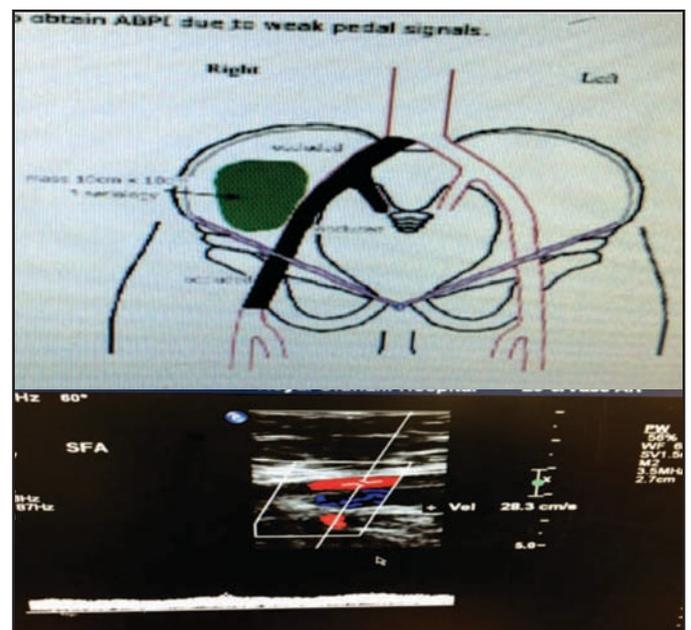
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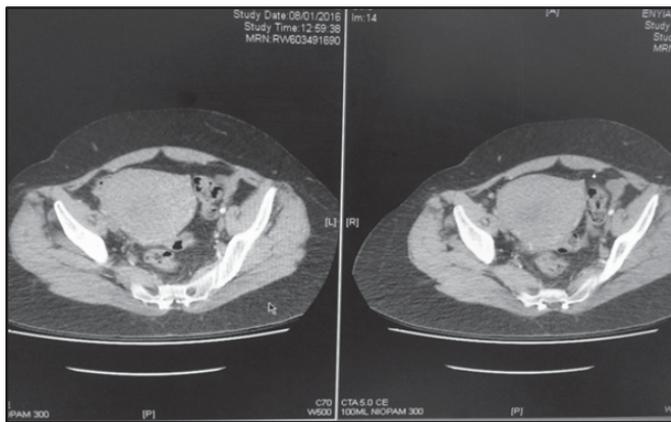
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sensation and discomfort. She has noticed blue discoloration and coldness of the limb which was gradually increasing with passage of time. There was no history of trauma, prolong immobilization, or infection. She had two children and there was no previous history of DVT or any vascular disease or coagulopathy in the past. She never used any hormonal contraceptives. She was a non-smoker and had no significant illnesses previously. On clinical examination, the pulses over the right lower limb were absent and capillary filling at toes were more than 6 seconds. Sensations were decreased as compared to the opposite side over all dermatomes of lower limb. Duplex scan revealed blockage of common femoral artery up to the external iliac and common iliac vessels. Monophasic flow was noted in PFA, SFA, and popliteal artery. A 10x10 cm size mass originating from the uterus compressing the common iliac vessels from outside, most likely a fibroid, was noticed (Fig - 1,2). Subsequent CT scan confirmed the diagnosis of a fibroid with bulky uterus (Fig - 2). After discussing the case with gynaecologist, hysterectomy along with embolisation of iliac artery and SFA were done. Colt was extracted from common iliac, external iliac and common femoral artery along with angioplasty of Common iliac artery which seemed to be stenosed at the site of compression. Patient showed satisfactory recovery and was discharged.



**FIG 1&2: DUPLEX SCAN PELVIS SHOWS THROMBOSIS OF COMMON ILIAC AND EXTERNAL ILIAC VEIN ON RIGHT SIDE**



**FIG 3: CT SCAN PELVIS SHOWS ON A LARGE SIZE UTERINE MYOMA CAUSING EXTERNAL COMPRESSION OVER COMMON AND EXTERNAL ILIAC VEIN.**

### DISCUSSION

The coincidental findings of pelvic vein thrombosis in cases of fibroid uterus without any risk factors are rare.<sup>7</sup> Many previous reports of uterine myoma with pelvic vein thrombosis were complicated by other risk factors for thrombosis, such as high-dose norethisterone acetate, history of venous insufficiency, lower extremity vein stripping or prior deep venous thrombotic events. Patients with protein C, protein S and anti-thrombin III deficiency are also at risk of DVT.<sup>8</sup> The pathogenesis regarding thrombo-embolism is that the large mass causes pelvic venous congestion and edema of the lower extremities due to external pressure over pelvic veins leading to thrombosis of pelvic or lower or both veins. Regarding thrombo-embolism, the spectrum of clinical presentation ranges from ovarian vein thrombosis to pulmonary vein thrombosis.

Literature review shows very few reports having the association of uterine leiomyoma and venous thromboembolism usually having no other known risk factors of thromboembolism. In these cases the myoma causes compression of pelvic veins, contributing to pelvic vein thrombosis and/or lower-limb thrombosis.<sup>1</sup> Henceforth large uterine myomata are a potential cause of venous stasis resulting in thrombosis being more on the left side of pelvis or lower limb.<sup>1,7,9</sup> Devabhaktuni et al has reported eight cases of pelvic vessel vascular thrombosis along with lower limb deep venous thrombosis (DVT) due to the compression of the pelvic vessels by the uterine fibroid over a span of twelve years.<sup>10</sup> Other than blood vessels, reports of uterine myoma causing compression of other intra-peritoneal organ is been also reported in literature. In this regard, the location, size and orientation of myoma, determine the nature and severity of symptoms. Literature review also shows that hydronephrosis, mesenteric vein thrombosis, acute intestinal gangrene can also be caused by uterine myomas.<sup>8,11</sup>

A number of other conditions cause external compression of ilio-caval vein leading to ilio-femoral vein thrombosis. Failure to diagnose and treat at earliest, results in increased venous pressure and recurrence of thrombosis leading to the development of post-thrombotic syndrome. One of the common anomaly is May-Thurner syndrome (iliac vein

compression syndrome), which involves external compression of left side common iliac vein by the right common iliac artery.<sup>11</sup> In another study by Chung et al, they identified that 80% patients have some anatomical abnormalities among patients with ilio-femoral vein thrombosis.<sup>12</sup> The common causes of external compression reported in literature includes uterine fibroids compressing the iliac veins or vena cava,<sup>13,14</sup> psoas abscess compressing the iliac vein,<sup>12</sup> retroperitoneal fibrosis involving inferior vena cava and the iliac vein, aortic or iliac artery aneurysms and rarely penile prosthesis reservoir and synovial cyst of hip.<sup>15</sup> Urological conditions have also been reported to cause external compression of the adjacent veins and may lead to iliofemoral thrombosis.<sup>11,15</sup> Alliota et al reported a giant hydronephrosis as a cause of iliofemoral thrombosis. Vesical diverticulum as a cause of DVT is an exceedingly rare condition.<sup>15</sup>

### CONCLUSION

Pelvic veins thrombosis caused by external compression is a rare complication of uterine myoma, nevertheless it should be considered especially in female patients who present with lower limb venous insufficiency.

#### Contribution of Author:

Ishtiaq Ahmed: Managed the case and wrote conclusion

Sundas Ishtiaq: Wrote introduction, Discussion and literature search.

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