

## Superficial Vaginal Myofibroblastoma: A Case Report and Review of the Literature

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### Abstract

Superficial myofibroblastoma is a rare tumor of lower female genital tract. We report a 38-year old patient who presented with a polypoid vaginal mass. Histopathological examination revealed edematous and myxoid places, collagenosis marked stromal atypia and mitotic activity, the spindle-oval-shaped, with vesicular nuclei and eosinophilic cytoplasm with chromatin of cells in tumor tissue. Immunohistochemical investigations showed reactivity for vimentin, desmin and CD34. Superficial cervicovaginal myofibroblastoma developing in this area should be differentiated from other mesenchymal tumors.

**Keywords:** Superficial vaginal myofibroblastoma, vagina, immunohistochemistry.

### Özet

Yüzeyel servikovajinal myofibroblastoma kadın alt genital sisteminin nadir görülen bir tümördür. Bizler bu olgu sunumunda 38 yaşında vajinal polipoid kitle ile başvuran hastamızı sunduk. Histopatolojik incelemede ödemli ve miksoid, yer yer kollagenöz stromada atipi ve belirgin mitotik aktivite göstermeyen, iğsi-oval biçimli, veziküler kromatine sahip çekirdekler ve eozinofilik sitoplazmaya sahip hücrelerden oluşan tümör dokusu izlendi. İmmünohistokimyasal incelemede Vimentin, CD34, Desmin ile kuvvetli reaksiyon görüldü. Yüzeyel servikovajinal myofibroblastoma bu bölgede gelişen diğer meşşimal tümörlerden ayırıcı tanısı yapılması gereken tümörlerdir.

**Anahtar Kelimeler:** Yüzeyel vajinal myofibroblastoma, vajina, immünohistokimya.

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### Introduction:

In 2001 Laskin et al. described a different tumor of the female lower genital tract which they called "superficial cervicovaginal myofibroblastoma" (MFB)<sup>1</sup>. Superficial cervicovaginal myofibroblastoma is a rare tumor which is seen at vagina and cervix and less frequently observed at the vulva<sup>1</sup>. Ganesan R et al. showed these tumors occurred in the vulva and vagina rather than in the cervix and vagina<sup>2</sup>. As a result of this they called new terminology of "superficial myofibroblastoma of the lower female genital tract" for these tumors<sup>2</sup>. Lower female genital tract superficial myofibroblastomas can be seen at women aged 23 to 80 as polypoid or nodular masses of variable size (2-65 mm)<sup>3</sup>. The exact etiology of this tumor is unknown. In the literature, these patients have hormone-related pathogenesis suggesting the possibility of a significant portion of tamoxifen use is seen<sup>2-3</sup>. Histological examination of MFB cases shows composition of ovoid- to spindle- or stellate-shaped cells with the structural pattern of the reticular, lace like or mesh like stromal collagen fibers<sup>1,2</sup>. Immunohistochemistry, revealing expression of desmin and variable immunoreactivity for alpha-smooth muscle actin, CD34, CD10, bcl2, CD99 which is helpful for the diagnosis<sup>3-5</sup>. Clinical follow-up after surgical excision of these tumors seem benign<sup>6</sup>. We report a 38-year old patient of superficial myofibroblastoma with the morphological and immunohistochemical spectrum of this rare tumor.

### Case Presentation

Thirty eight year old patient admitted to our clinic with complaint of slowly growing gray colored vaginal lesion for two years. Patient had no history of hormone use in medical history. Polypoid tumor structure was observed in the structure of 3 x 2.5 x 1 cm on the left vulvovaginal junction. No additional gynecological pathologies were observed based on patient-examination and transvaginal ultrasonography. The lesion was excised to include normal tissue margins were sent to the pathology department for evaluation. The specimen was fixed in 10% formalin and embedded in paraffin. The slides were stained with hematoxylin-eosin. All results were analyzed immunohistochemically to semi-quantitatively scored on a scale 0-4 in manner as 0, there is no detectable immunoreactivity; 1, 10% of tumor cells immunoreactive; 2, 10% to 25% of tumor cells immunoreactive; 3, 25% to 50% of tumor cells

immunoreactive; 4, more than 50% of tumor cells immunoreactive. Mitotic activity was assessed by examination of 50 randomly chosen fields (high power field, 400) (Olympus BH2 microscope, Olympus, Tokyo, Japan).

Histopathological gross examination revealed a well-defined, lobulated with no capsule gray lesion was observed. Tumor tissue consisting of places with edema and myxoid, collagenous stroma not show significant atypia and mitotic activity and spindle-oval shaped cells with nuclei consist of vesicular chromatin and eosinophilic cytoplasm (Figure 1 and 2). Mitotic activity is considered to vary between 0 and 2, and no mitotic atypia was monitored. Tumors showed fascicular pattern in some areas. Tumor cells showed strong to moderate immunoreactivity for Vimentin, CD34, desmin, ER and PR (Figure 3 and 4).

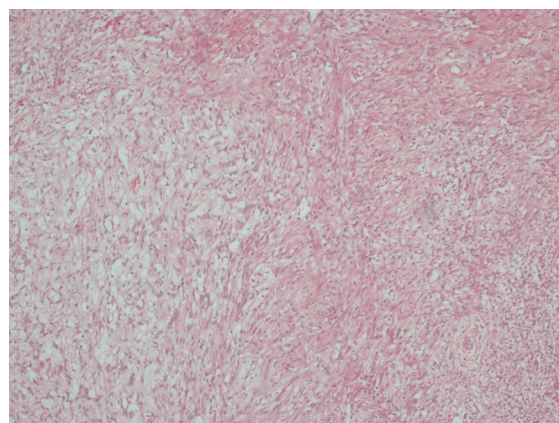


Figure 1. Spindle-shaped mesenchymal cells in collagenous stroma edematous and myxoid areas (HE stain, x100).

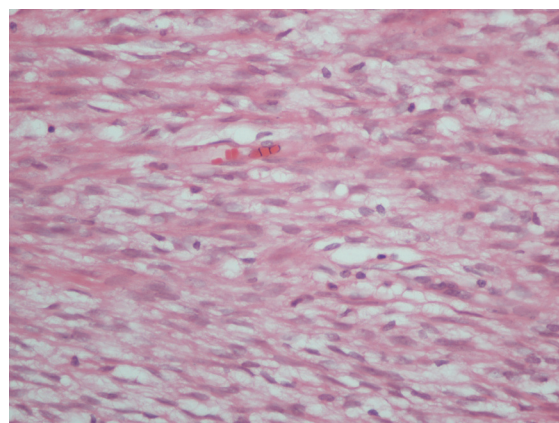


Figure 2. Spindle and stellate shaped cell in collagenous stroma, with oval, long nucleus. No vesicular chromatin, nuclear atypia and mitotic activity seen in these cells (HE stain, x400).

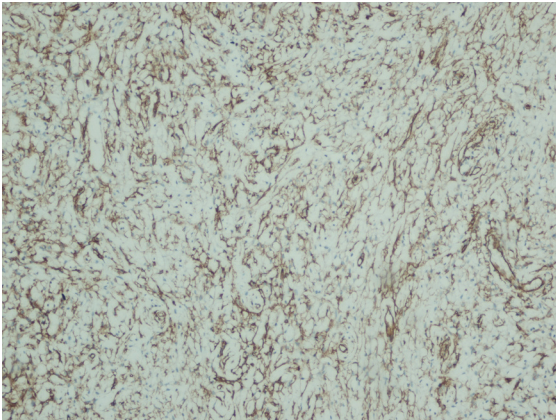


Figure 3. Tumor cells showed intense immunopositivity for CD34 (Immunoperoxidase X200).

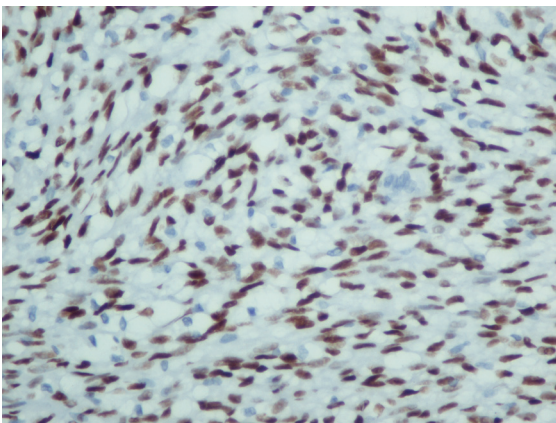


Figure 4. Tumor cells showed intense immunopositivity for ER (Immunoperoxidase X400).

### Discussion

Superficial cervicovaginal myofibroblastoma (MFB) is a rare tumor of the female lower genital tract. Superficial cervicovaginal myofibroblastoma, superficial angiomyxoma, cellular angiofibroma, angiomyofibroblastoma and fibroepithelial polyps are closely associated tumors with common histogenesis. These tumors probably originate from the pluripotent primitive cells surrounding connective tissue<sup>6,7</sup>. However, the pathogenesis of these tumors is not known exactly. Drugs and hormonal factors are thought to play a role in the pathogenesis MFB<sup>1,2</sup>. The differential diagnosis of MFB is difficult from the other mesenchymal tumors of this region. MFB shows immunohistochemical features like myofibroblastic differentiation which is similar to fibroepithelial stromal polyps and

lesions angiomyofibroblastoma lesions. Therefore, histopathological evaluation and diagnosis is important. Superficial angiomyxoma seen is another mesenchymal tumor originating in this area, which is small, lobulated; satellite or bipolar lesions are characterized by fibroblasts<sup>8</sup>. These tumors are negative for desmin by immunohistochemical staining<sup>8</sup>. For S-100 a variable expression is seen<sup>8</sup>. Aggressive Angiomyxoma is a large tumor which infiltrates the surrounding tissues<sup>9</sup>. These tumors show positive staining for vimentin, actin and desmin and negative for S-100 with immunohistochemical staining<sup>9</sup>. Angiomyofibroblastoma often been reported in the vagina was seen in some cases of vulvar region<sup>10</sup>. These tumors observed as small, well-defined, encapsulated lesions<sup>10</sup>. Histological examination reveals hypocellular and hypercellular areas<sup>10</sup>. The fibroepithelial stromal polyps are subepithelial, poorly circumscribed lesions, lacking an identifiable lesional margin<sup>11</sup>. Immunohistochemically these tumors are vimentin-positive and generally desmin-positive<sup>11</sup>.

Superficial cervicovaginal myofibroblastoma is rare, benign, superficial located and relatively place specific, mesenchymal tumors of the lower female genital tract. Clinical and histopathological diagnosis of these tumors may be confused with superficial angiomyxoma, cellular angiofibroma, angiomyofibroblastoma and fibroepithelial polyps which seen in this region.

### Ethical issues

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

### Conflict of interests

The authors declare no conflict of interests related to this manuscript.



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