Primary Vaginal Leiomyosarcoma: A Case Report and Review of the Articles

Elham Shirali†, Fariba Yarandi†, Mostafa Safavi†, Omid Hemmatian†, Marjan Ghaemi†*

1. Associated Professor, Gynecologist-Oncologist, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran
2. Professor, Gynecologist-Oncologist, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran
3. Urologist, Uro-oncologist, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran
4. Medical Doctor, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran
5. Associated Professor, Ob-Gynecologist, Kamali Hospital, Alborz University of Medical Sciences, Karaj, Iran

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Corresponding Information:
Marjan Ghaemi, Kamali Hospital, Alborz University of Medical Sciences, Karaj, Iran
Email: Marjan_ghaemi@yahoo.com
Tel: 098912190733

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ABSTRACT

Background & Objective: Primary vaginal sarcomas are extremely rare and counts about 2-3% of all vaginal malignancies. We report a case with vaginal leiomyosarcoma which was treated by radical hysterectomy.

Case Report: A 46 year old woman from Iraq, referred to Yas Hospital by chief complaint of post-coital bleeding and a vaginal mass with pathology report of vaginal leiomyosarcoma. She underwent radical hysterectomy with bilateral salpingo-oophorectomy and partial vaginectomy (2/3 upper of the vagina). She refused to receive chemotherapy after surgery. In 3 years follow up, she did not have any recurrence.

Conclusion: Experiences about vaginal leiomyosarcoma are not sufficient due to rarity of the disease. However, based on review of the literature surgery is still the first choice followed by both chemotherapy and radiotherapy that are preferred based on current reports.

Keywords: Primary vaginal sarcomas, Radical hysterectomy, Vaginal Leiomyosarcoma

Introduction

Primary vaginal carcinomas are extremely rare and counts about 2-3% of all vaginal malignancies (1). Vaginal sarcomas account only 3.1% (2). Of the all primary sarcoma of the vagina, leiomyosarcoma is a rare soft tissue malignancy originated from smooth muscle and counts about 5 to 10 percent of soft tissue sarcomas. However, leiomyosarcoma is the most common vaginal sarcoma in adult women (3, 4). The most origin of the vaginal leiomyosarcoma is the smooth muscles of the vaginal wall, but may be originated from tissues near the vagina (5). It is suggested that surgical approach followed by radiotherapy or chemotherapy, improves survival in this patient (6). Here we report a vaginal leiomyosarcoma case that was treated by radical surgery. The patient however refused to receive post-operative chemoradiation therapy.

Case Report

A 46-year-old woman referred to Yas hospital Tehran, Iran, in 2019, with chief complaint of post-coital bleeding, vaginal discharge and occasionally dyspareunia for about 8 months. Her past medical and surgical history was not significant. She denied any family history for cancer. On pelvic examination, an about 3×4 cm mass was palpated in upper to middle part of the left lateral wall of vagina. The mass was firm, immobile with sharp borders. Examination of the cervix and uterus was not significant. Imaging (MRI) revealed no pathological findings. The mass was resected in the operating room. The pathology report indicated a 3×3.7×4.5 cm brownish, firmly mass without adhesion to adjust tissue excided. The microscopic view showed multiple areas of cellular spindle cells with high mitosis, mild pleomorphism, few multi-nucleated giant cells and infiltrating fibrosis tissue that was highly suggestive of low-grade leiomyosarcoma (7). The margins of the mass were free of tumor.
She underwent radical hysterectomy, bilateral salpingo-oophorectomy and partial vaginectomy. On frozen section and permanent pathology report, no tumor cells were detected. She refused to receive further chemotherapy or radiation therapy. She is disease free after near 3 years follow up.

**Discussion**

Smooth muscle tumors, even rare, are reported to be the most common benign and malignant mesenchymal tumors in adult women. Leiomyosarcoma may originate of any part of the vagina and are mostly submucosal (4). The Survival is age dependent and is better in younger age. Stage of the disease is also a predictive factor in survival. Totally, the 5 years survival rate is 43% (8).

Most patients experience vaginal discharge or bleeding or rarely dyspareunia and micturition. Vaginal leiomyosarcoma has local invasion but it can spread hematogenously to lungs (9).

The primary treatment for these tumors is surgery with clear margin (4); however, Peters et al. considered pelvic exenteration for long-term survival (9). In young ages with low stage tumors, surgical resection has a better prognosis in comparison to chemotherapy or radiation therapy (10).

Adjuvant radiotherapy may be optional in high-grade sarcoma, recurrence of low-grade tumor or tumor spreading over margin and might decrease the local invasion of the tumor (4). There is no enough data in radiation therapy in vaginal leiomyosarcoma; however, it was reported that postoperative pelvic radiation therapy in early stages in the uterine leiomyosarcoma did not improve the overall survival when compared with observation (11). Chemotherapy in managing vaginal sarcomas is controversial; however, it could be beneficial in high-grade tumors and for cases in which the surgical margins were positive due to systemic effect and relapses prevention (12, 13).

The studies also showed that there was no difference in survival rate between patients with only surgical approach and those with surgery followed by adjuvant chemotherapy or radiation therapy (8) and the current literature strongly indicates that primary surgical management continues to be the best option (1).

However, in some studies, the multi-modality method of treatment including surgical approach followed by both chemotherapy and radiotherapy is preferred as it reduces recurrences (1).

Our case was a primary low grade vaginal leiomyosarcoma that was treated surgically. In conclusion, vaginal leiomyosarcoma is a rare cancer of the vagina. The data about the treatment is predominately through rare case reports. As such, the gynecologic oncologist must manage such cases individually. We manage it surgically and refused to receive chemoradiation post operation and she is disease free but we cannot expand this result to all similar cases. The long term follow up is mandatory to find appropriate management and prognosis of these patients.

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**Ethical Permission**

This study is with patient permission publish her medical data. The identity of the patient was confidential and not disclosed in the study.

**Conflict of Interest**

The authors declared no conflict of interest regarding the publication of this article.

**References**


