International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Case Report

A Novel Adjuvant Therapy to Prevent Recurrence in Recurrent Aggressive Angiomyxoma: A Case Report and Review of Literature

Shakuntala.P.N[1*@], Shobha.K[2*], Bafna.U.D[3*], Namrata.N.R[2**], Ravi. N. P[1*], Umadevi.K[4*]

[1]Fellow in Gynaecologic Oncology, [2]Assistant Professor, [3]Professor and HOD, [4]Associate Professor
[*]Department of Gynaecologic Oncology, [**]Department of Pathology,
Kidwai Memorial Institute of Oncology, Bengaluru, Karnataka, India.

[@]Correspondence Email: shakuntala_pn@yahoo.com

Received: 17/09//2012 *Revised: 06/10/2012* *Accepted: 09/10/2012*

ABSTRACT

Aggressive angiomyxoma (AAM) is a rare mesenchymal tumor. The term aggressive emphasizes the often infiltrative nature of the tumor and its frequent association with local recurrence.

We report a case of recurrent aggressive angiomyxoma with an unusual presentation, as retention of urine, constipation and dysparenuia, also arising from an unusual site- recto vaginal septum. Preoperative CT scan revealed the presence a huge pelvic mass arising from the recto vaginal septum infiltrating into the rectum, right parametria, right lateral pelvic wall, inferiorly into the ischiorectal fossa and extending medially, obliterating the vaginal and rectal lumine, there by producing the above symptoms. She was treated successfully with abdomino-pelvic resection. Tumour was estrogen and progesterone receptor positive and hence started on oral megesterol acetate. To the best of our knowledge this is the first case reported in the English medical literature where a recurrent aggressive angiomyxomas was treated adjuvantly with megestrol acetate and she was in remission for 12 months,but declined to continue megestrol due to financial constraints and within 8 weeks she recurred with a vaginal mass. We have discussed the pathologic and immunohistochemical characteristics, the difficulties in determining the surgical margins as the tumor was arising from a rare site, the recto vaginal septum and burrowing into the pelvis. The adjuvant therapy options of this tumor are also discussed along with review of literature.

Key words: Recurrent angiomyxoma, Aggressive angiomyxoma, Megestrol acetate.

INTRODUCTION

Aggressive angiomyxomas (AAM) are uncommon and slow growing, soft (often gelatinous) and benign tumors, which predominantly arise in the vulvo-vaginal, perineal region, and pelvis of young women. The term aggressive emphasizes the often infiltrative nature of the tumor and its frequent association with local recurrence and hence a close follow up is essential and it was reported for the first time in 1983 by Steeper and Rosai. Since then less than 250 cases have been reported all over the world. [1,2,3] There are no pathognomonic clinical or

radiological features. Hence they are diagnosed histopathologically. [4] These tumors have a recurrence rate ranging from 25% to 47%. [5] Metastases are exceedingly rare, and overall, the prognosis is good. [1]

Multi-modality treatment options are reported following recurrence. Aggressive mutilating surgery or repetitive surgeries to obtain wide surgical margins have not proved to be beneficial over obtaining narrow margins to prevent recurrences. Estrogen receptor and progesterone receptor positivity is frequently found in these tumors, which may be hormonally dependent and hence may increase during pregnancy. [6] This concept has been exploited and hormonal manipulation by using megestrol acetate was attempted in the present case.

CASE REPORT

A 40 year old woman presented with history of multiple episodes of retention of urine, constipation and dysparenuia which were relieved on catheterisation, proctoclysis enema and antibiotics. She was operated for vaginal angiomyxoma 4 years back. On examination, no obvious abdominal mass was palpable. A bulge was seen through the introitus. On per speculum examination there was a huge mass arising from the right posterolateral vaginal wall, obscuring the vaginal cavity and displacing the cervix behind the symphysis pubis. On per vaginal and rectal examination a cystic, non tender mass measuring 20x20x10 cms, with restricted mobility was felt arising from the right posteriolateral vagina, indenting the rectum ,but mucosa was free and extending to right parametria and inferiorly into the ischio-rectal fossa. Uterus appeared multiparous size and was pushed to the left side along with the cervix. Pre operative CT scan showed a multi cystic mass occupying the right side of pelvis and extending into the vagina medially, ischiorectal fossa inferiorly, laterally up to the lateral pelvic side wall and superiorly abutting the bladder base and posterior uterine wall, with loss of planes, figure-1,2. Hence abdomino perineal resection was decided for a provisional diagnosis of recurrent angiomyxoma. Haemogram, biochemistry and chest x-ray were normal.

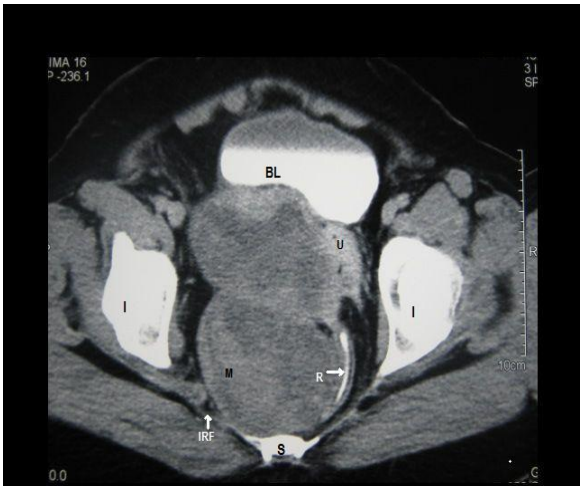

Figure 1: Mass with heterogenous appearance(M), indenting the bladder(B) anteriorly, displacing the uterus(U) to the left side of pelvis, obliterating the rectal lumen (R)and displacing its walls to the left, posteriorly abutting the sacrum(S), and on the right side infiltrating the fascia above the levator ani muscle and appears burrowing into the ischio-rectal fossa (IRF).

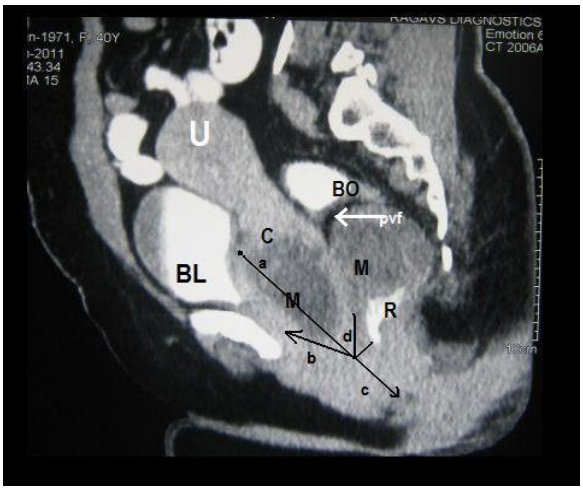

Figure 2: Mass (M) seen indenting the rectum(R) almost impinging on the sacrum. In posterior relation to the uterus (U) and cervix (C) is seen the contrast filled bowel (BO) and obliterated posterior vaginal fornix (pvf). Anteriorly the mass is indenting the bladder base(BL-a) compressing the urethra (arrow b), attaching itself to the rectovaginal septum(d), inferiorly extending into the ischiorectal fossa(c).

Intraoperatively uterus was multiparous in size, being pushed to the left along with the cervix and normal appearing ovaries. On opening the layers of right broad ligament a glistening white cystic mass was removed after clamping all its attachment mainly from the rectovaginal septum , adherently sweeping on to the anterior rectal wall, to the right posterolateral vaginal wall extending up to mid vagina. Laterally encroaching to the right lateral pelvic wall and extending inferiorly into the ischiorectal fossa. After abdominal mobilization the perineal resection was completed by separating its attatchments to the vaginal wall posterior-laterally, inferiorly burrowing into the ischiorectal fossa, anteriorly from the bladder base and posteriorly from the rectum were the planes were obliterated figure-3,4. The whole cystic mass was removed through the abdomino-perineal approach achieving grossly optimal margins. Post operative period was uneventful.

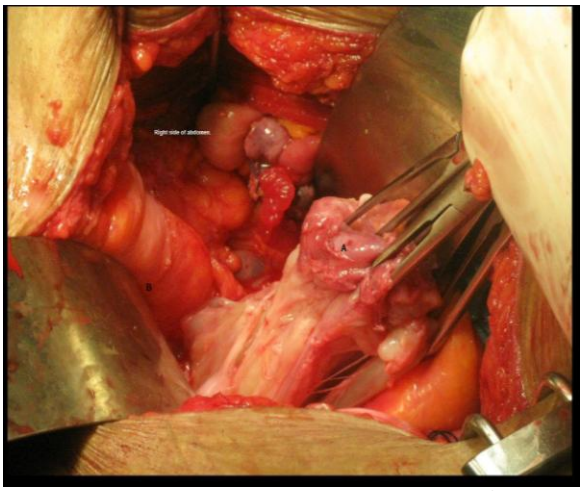

Figure 3: A-angiomyxoma being dissected anteriorly from the bladder (B).

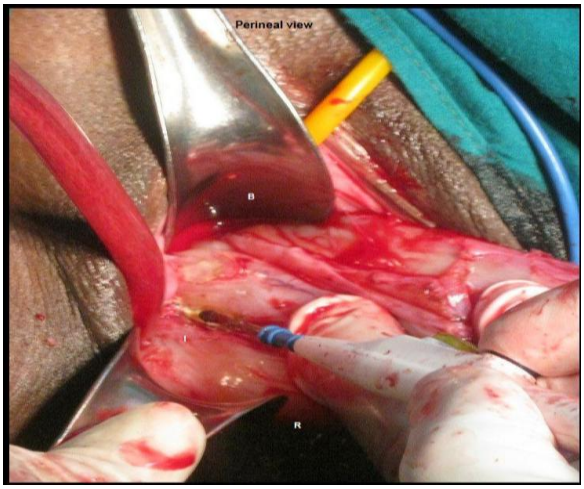

Figure 4: Perineal view. Dissecting to release the attachment in the right ischio rectal fossa.

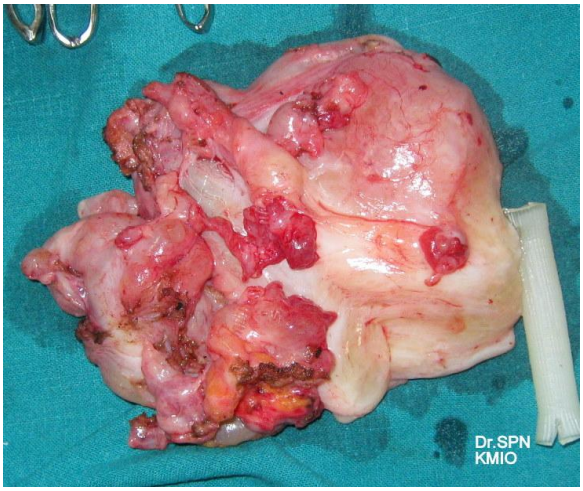

Figure 5: Gross gelatinous and fleshy looking tan, pink appearance of Angiomyxoma.

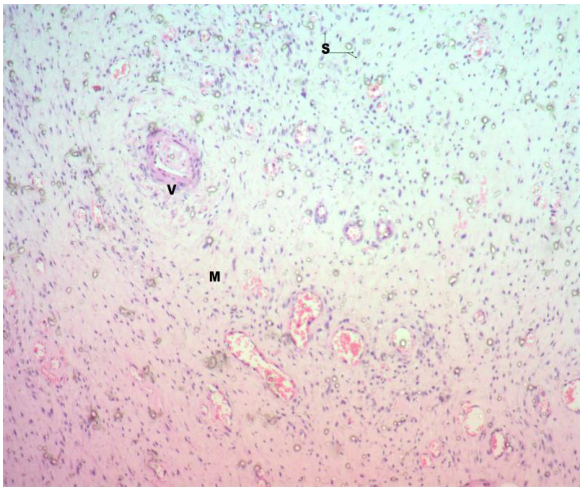

Figure 6: H&EX40: tumour is sparsely celluar stroma(M) , composed of uniform stellate cells(S), also seen are vessels of variable calibre one of them is thick walled(V).

Pathology: Morphology: uterus 8x5x3 cms. An unencapsulated, glistening, tan-pink, bulky tissue with a rubbery consistency. Cut surface showed multiple soft tissue growth which were, gelatinous, irregular, glistening, largest measuring 9.5x 4x 3 cms. No haemorrhage or necrosis was seen. Figure 5

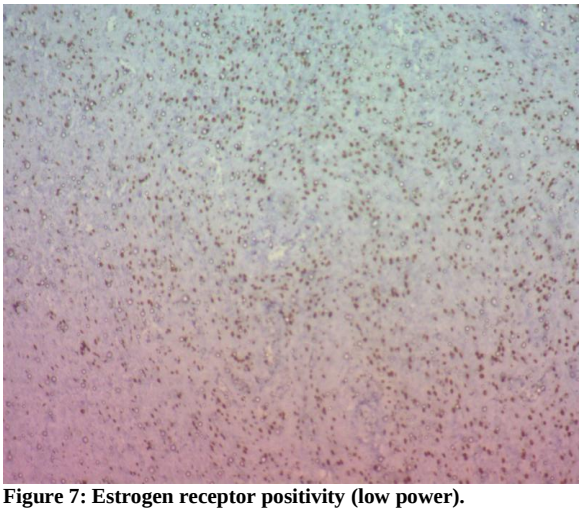

Figure 7: Estrogen receptor positivity (low power).

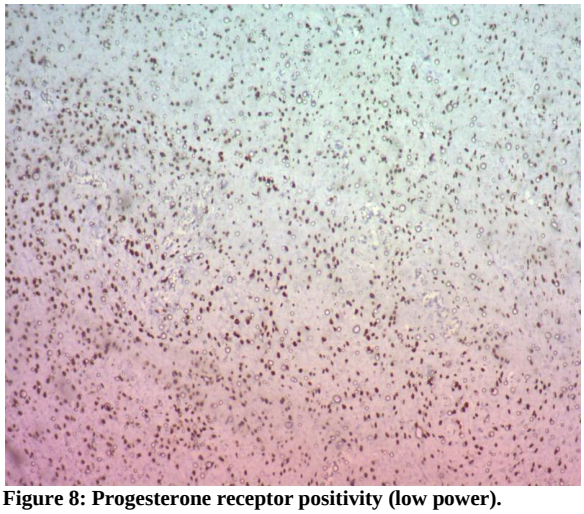

Figure 8: Progesterone receptor positivity (low power).

Figure 9: Recurrence of the tumour.

Microscopy: A sparsely cellular tumor composed of pale to eosinophilic stroma studded with numerous haphazardly arranged blood vessels that stand out against the myxoid background and range in size from thin-walled capillaries and venules to larger muscular arteries. The tumor cells are cytologically bland and have a stellate appearance with ill-defined cytoplasmic borders, figure.6. Estrogen and Progesterone receptor show positive staining figure 7 and 8.

Post-operatively she was started on oral Megestrol acetate 160 mg daily .She was on follow up for 12 months and there was no evidence of recurrence clinically or sonographically. Due to financial constraints she declined to continue the treatment and within 8 weeks we could notice a vaginal mass at the introitus figure 9, confirmed by ultrasonography.

DISCUSSION

Aggressive angiomyxoma (AAM) was first reported as a distinct variant of myxoid neoplasms in the female vagina and pelvis by Steeper and Rosai in 1983 , since then more than 250 cases have been reported all over the world. [2,3] But, it is occasionally reported in men (male-to-female ratio, 1:6). [6] The pathogenesis is unclear, but recently a Chromosomal translocation of the 12q13-15 band involving the HMGA2 gene has been described. [1]

They occur commonly in the 2nd to 4th decades of life. It behaves like a low-grade sarcoma with high propensity for local spread and recurrence (25%-47%), about 85% of those occurring within 5 years of initial surgery. They rarely metastatize to distant organs. [1,5] Present case had recurrence for the second time following local resection for a vaginal mass. She presented with the distending mass, producing pressure effects viz., retention of urine, constipation and dysparenuia .Most of them are asymptomatic and when patients do experience symptoms, pelvic fullness and pressure, perineal swelling, vulvo-vaginal pain, dysmenorrhea, dyspareunia, and changes in bowel and bladder function have been reported. [7]

Preoperative imaging studies are important to determine the extent of the mass and hence optimum resectability. On a computed tomographic (CT) scan, tumor has a well-defined margin and attenuation less than muscle, a"swirled" internal pattern may also be found. The attenuation on CT, may be because of its loose myxoid matrix and high water content. [8]

It is important to realise the need for preoperative imaging to delineate the extent of the mass to decide the route and extent of surgery. The first line of therapy for AAM is surgery, although achieving negative resection margins is difficult because of the infiltrative nature of the tumor and the absence of a defined capsule. Chan YM et al [9] after a review of 111 cases of AAM questioned the necessity of radical resections. The data showed that there was no statistical difference in remaining disease-free between groups of patients with positive and negative resection margin results (40% and 50% in 10 years, respectively). Hence, incomplete removal is acceptable when significant operative morbidity, unacceptable mutilation is anticipated or when preservation of fertility is a concern. [4,9]

It is impossible to distinguish this variant of tumor clinically from other commonly arising tumors like vulval lipomas, bartholis cyst. Microscopically it must be differentiated from malignant tumours with myxoid change, like liposarcoma and myxoid leiomyosarcoma. Hence, histopathologic examination has a central role in diagnosis of this tumour. [4]

Histologically, the neoplasm is composed of myofibroblastic cells and prominent blood vessels within a myxoid stroma. Hormone dependency has been suggested and other reports have demonstrated ER and/or PR positivity within aggressive angiomyxoma of pelvic soft parts in women. This suggests that aggressive angiomyxoma might be a hormone responsive neoplasm. [6] The present case also expressed ER and PR positivity. This was the rationale of using oral Megesterol acetate (progesterone) 160 mg once a day after food as an adjuvant therapy to alter the hormonal miliu in the tumour bed and hence prevent recurrence. The use of radiation therapy, [4] gonadotrophins [10] and tumour embolization [6] as an adjuvant therapy, to shrink the size of tumor, to enable better respectability have been reported. Post radiation colpoclesis and local soreness in these young patients who are sexually active limits the use and gonadotrophin induced suppression of ovarian function and there by osteoporosis needs to be addressed.

Despite the morbidity associated with tumor recurrence and repeat surgeries, the prognosis for patients with AAM is generally considered good. Close clinical follow-up with imaging studies has been advocated. [8] Only 2 cases of Metastatic Agresssive angiomyxoma have been reported in the literature. [1] Present case was on follow up every third monthly for 12

months, along with clinical examination and ultrasonography of abdomen and pelvis. There is no evidence of recurrence for 12 months. Due to financial constraints she declined to continue the use of oral megestrol acetate. Within 8 weeks she presented with a vaginal mass seen through the introitus. This clinical observation confirmed that angiomyxoma was a hormonally dependent tumor which remained suppressed by megestrol acetate and resurface d once the effect of the drug was lost. Hence, we report the use of oral megesterol acetate 160 mg used once a day as an alternative adjuvant therapy to prevent recurrence following resection if ER/PR status is positive. The novel use of this drug is the first of its kind to be reported in the English medical literature. The duration of use, side effects, drug interactions cannot be commented upon. Theoretically, may be once the salvaged ovaries stop secreting hormones and there is a substantial change in the hormonal miliu, these tumours may become static. This opinion needs to be researched.

CONCLUSION

Oral Megestrol acetate appears to be a promising post operative adjuvant therapy in recurrent aggressive angiomyxoma especially in women where the tumour is positive for estrogen and progesterone receptors.

ACKNOWLEDGEMENT

We thank Dr. Pallavi.V.R, Dr. Praveen. S.R, Dr. Rajshekar, Dr. Abhilasha, Dr. Aruna S for their inputs in patient care. We appreciate the nursing support provided by our OT, ICU and ward staffs.

REFERENCES

1. Sutton.B.J, Laudadio. J. Aggressive Angiomyxoma . Arch Pathol Lab Med. 2012;136:217–221.
2. Steeper TA, Rosai J. Aggressive angiomyxoma of the pelvis and perineum: report of nine cases of a distinctive type of gynecologic soft tissue neoplasm. Am. J. Clin. Pathol 1983*;* 7*:* 463–75.
3. Haldar K, Martinek IE, Kehoe S. Aggressive angiomyxoma: a case series and literature review. Eur J Surg Oncol. 2010 Apr;36(4):335-9.
4. Sharma JB, Wadhwa L, Malhotra, Arora R, Singh S. Recurrent aggressive angiomyxoma of vagina--a case report. Indian J Pathol Microbiol. 2004 Jul;47(3):425-7.
5. Fetsch JF, Laskin WB, Lefkowitz M, Kindblom LG, Meis-Kindblom JM.Aggressive angiomyxoma: a clinicopathologic study of 29 female patients. Cancer. 1996;78(1):79–90.
6. Han-Geurts IJ, van Geel AN, van Doorn L, den Bakker M, Eggermont AM, Verhoef C. Aggressive angiomyxoma: multimodality treatments can avoid mutilating surgery. Eur J Surg Oncol. 2006;32:1217–1221.
7. Magtibay PM, Salmon Z, Keeney GL, Podratz KC. Aggressive angiomyxoma of the female pelvis and perineum: a case series. Int J Gynecol Cancer. 2006; 16(1):396–401.
8. Outwater EK, Marchetto BE, Wagner BJ, Siegelman ES. Aggressive angiomyxoma: findings on CT and MR imaging. AJR .1999;172:435–438.
9. Chan YM, Hon E, Ngai SW, Ng TY, Wong LC. Aggressive angiomyxoma in females: is radical resection the

only option? Acta Obstet Gynecol Scand. 2000;79(3):216–220.
10. McCluggage WG, Jamieson T, Dobbs SP, Grey A. Aggressive angiomyxoma of the vulva: dramatic response to gonadotropin-releasing hormone agonist therapy. Gynecol Oncol. 2006;100(3):623–625.

How to cite this article: Shakuntala PN, Shobha K, Bafna UD *et. al.* A novel adjuvant therapy to prevent recurrence in recurrent aggressive angiomyxoma. a case report and review of literature. Int J Health Sci Res. 2012;2(7):124-130.

****