Aggressive Angiomyxoma in Pregnancy
Tasneem Ashraf and Samia Haroon

ABSTRACT
Aggressive angiomyxoma is a locally aggressive soft tissue tumour mainly arises from perineal, vulval and bladder connective tissue. As it has a tendency for local infiltration and recurrence so long-term follow-up and treatment is required. A case of 24 years old primigravida, 16 weeks pregnant with huge pedunculated lobulated growth arising from right labia majora for the last one month is presented. There was a rapid increase in the size of tumour up to 30 x 26 cm and weight of 18 kg with in a month. The growth was excised with wide margins and tissues sent for histopathology to be diagnosed as an aggressive angiomyxoma. Postoperatively, no chemo or radiotherapy was given. She was regularly followed-up and presented in the 37th week of pregnancy with ruptured membranes and failure of progress of labour. Her caesarean section was done and baby boy delivered. She had a regular follow-up and conceived again after 3 years. No recurrence of the growth has occurred within 5 years.

Key Words: Aggressive angiomyxoma. Vulval tumour. Pregnancy.

INTRODUCTION
Aggressive angiomyxoma is a rare vulval tumour, usually occurs in women during reproductive years.1 It is locally infiltrative and mainly arises from pelvic and perineal soft tissues. Aggressive angiomyxoma has a high rate of local recurrence; relapse has been reported in 30 – 40% cases.2 According to latest WHO-classification, Aggressive Angiomyxoma (AA) is classified as “tumour of uncertain differentiation”. The term aggressive was introduced to emphasize the locally aggressive behaviour and the high potential for local recurrence.3 The pathogenesis is unclear, but recently a translocation at chromosome 12 with aberrant expression of the protein isoform I-C (HMGIC) [involved in DNA transcription] is demonstrated.2 On gross appearance, they are lobulated and may adhere to surrounding soft tissue. Microscopically, cells with a spindled or stellate morphology are seen embedded in a loose matrix consisting of wavy collagen and oedema. The hallmark of AA is blood vessels of varying calibre haphazardly scattered throughout the tumour parenchyma, whereas mitotic figures are rare. Immunohistochemically, most AA is positive for desmin, smooth muscle actin, vimentin, oestrogen, and progesterone receptors.4 Surgical excision remains the mainstay of treatment. Current research does not support excision with “wide surgical margins,” as the recurrence rate in patients with narrow surgical margins is not higher than that of patients with wide surgical margins.5

Postoperative radio or chemotherapy are considered less suitable options due to low mitotic activity. GnRH analogs have been used for the treatment of relapsed cases with poor results.6

We describe this rare tumour in a primigravida, which was excised. No recurrence occurred over the 5 years of follow-up.

CASE REPORT
A 24 years old, primigravida, 16 weeks pregnant, resident of Dalbandin, school teacher, married for 5 months presented in a private clinic. She complained of vulval growth, difficulty in walking and pain in the vulval area for the last one month. On general physical examination, she was a young lady of average height, weighing 50 kg, healthy looking but uncomfortable due to difficulty in walking. Pulse was 85 beats per minute with low volume, BP 90/60 mmHg. Temperature and respiratory rates were normal. She was moderately anaemic; there was no palpable lymph node or oedema. Systemic examination was unremarkable. On per abdominal examination, uterus was 16 weeks size.

On inspection of external genitalia, the labia majora were slightly swollen and the clitoris was normal looking. A large pedunculated lobulated looking growth was seen arising from posterior surface of right labia majora and forchette. There was multifocal ulceration and bleeding. The size of the growth was 30 x 26 cm, with soft cystic consistency and slight tenderness to touch (Figure 1). Vagina was healthy looking. On per vaginal examination, uterus was 16 weeks size with normal adnexa.

Positive laboratory findings included ESR of 45 mm after first hour and urine having 6 - 8 pus cells, HBsAg and HCV antibodies were non-reactive. Ultrasound showed a single alive fetus of 16 weeks without any other abnormal finding.
Wide local excision and reconstruction of vulva was done. The tumour weighed 18 kg. Histopathology report of specimen revealed an aggressive angiomyxoma. The tumour was low to moderately cellular composed of spindled and stellate-shaped mesenchymal cells embedded in a finely collagenous myxoid and oedematous stroma. No abnormal cells were seen (Figure 2).

On histoimmunochemical staining, tumour cells were positive for desmin and oestrogen receptors. Margins were free of tumour.

Postoperatively, antibiotic cover was given but no chemotherapy was required as no abnormal mitotic cells were seen. Rapid and complete recovery was observed and patient was discharged on 3rd day. She remained healthy and symptom-free till 37 weeks of pregnancy, when membranes ruptured and the labour failed to progress so that LSCS was required. A baby boy of 2.3 kg was born. Patient has been on follow-up for 5 years. She had another normal conception without growth recurrence.

**DISCUSSION**

This case is unusual in many aspects. Aggressive angiomyxoma is usually a slowly growing tumour but in this case, tumour growth was very rapid and attained a size of 26 x 30 cm and weight of 18 kg within a month. This tumour mostly occurs in women during the reproductive age with peak incidence in the third decade of life, suggesting that oestrogen may stimulate its growth. Tumours occurring during pregnancy have a rapid growth as there is high level of oestrogen and progesterone. This patient was also a young lady with 16 weeks pregnancy. Estrogens and progesterone receptors are commonly found in aggressive angiomyxoma, so they may be hormone-dependent, hence, they are likely to grow during pregnancy and respond to hormonal manipulation. In this case, tumour was positive for oestrogen and Desmin receptors.

Imaging studies are important to determine the extent of tumour and for surgical approach. The tumour usually has a well-defined margin and attenuation less than muscle on a computed tomographic (CT) scan. On MRI, it is ISO intense relative to muscle, with contrast enhancement on a gadolinium scan. Imaging studies were not done as the patient was pregnant and clinically no metastasis were found.

The tumour was excised with wide margins as it is the treatment of choice up till now. Postoperative radiotherapy or chemotherapy is considered a less suitable option due to low mitotic activity of the tumour. Hormonal manipulation with tamoxifen, raloxifene, and gonadotropin-releasing hormone analogs (GnRH agonists) has been attempted, but their role is not clearly defined. These have been shown to reduce the tumour size and may help to make complete excision feasible in large tumours and in the treatment of recurrence. Another treatment modality described is angiographic embolization of the aggressive angiomyxoma. This may help in subsequent resection by shrinking the tumour as well as making it easier to identify from surrounding normal tissues.

Recurrence is frequent in about 30 - 40%, and may occur from months to several years after excision (2 months to 15 years). Resection with wide margins does not appear to reduce recurrences when compared with narrow margins or even incomplete resection. So long-term follow-up is required.

Though aggressive angiomyxoma is locally aggressive tumour, its prognosis is good. Usually this tumour does not metastasize, but there are two reports of multiple metastases occurring in women treated initially by excision who succumbed to metastatic disease later. A 63-year-old woman with aggressive angiomyxoma of the pelvis had pulmonary, peritoneal, and lymph node metastases, ending in death. A 27-year-old woman with multiple local recurrences (7 years after resection) had
pulmonary metastases 2 years later, and she died an year later.10
The present case has undergone a follow-up of 5 years with another uneventful conception and there has been no recurrence till now.

REFERENCES