



Recurrent Infiltrating Angiolipoma – Complete Response to Radiation- A Case Report

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Abstract

Angiolipoma of thigh is a benign tumor of adipose tissue, so far only few cases have been reported. We are reporting a case with complete response to radiation. A female patient of Recurrent Angiolipoma was referred to our institute for further management.

Keywords: *angiolipoma, infiltrating, thigh neoplasm, recurrent, complete response to radiation.*

Introduction

Angiolipomas are benign neoplasms of adipose tissue. Angiolipoma is a variant of lipoma exhibiting proliferating capillaries admixed with mature adipocytes. Angiolipoma was first defined by Bowen in 1912^[1] and differentiated from lipomas; histopathologically by Howard in 1960^[2] it has a rich vascular component and is classified as infiltrating and non-infiltrating. The infiltrating lesions are usually non capsulated or rarely encapsulate partially and tends to infiltrate bony, neural, muscular and fibro cartilaginous tissues, often making a complete resection difficult. Hence recurrences are observed. Surgical excision of tumour remains the treatment of choice of angiolipoma. In case of

recurrence surgical excision with adjuvant radiotherapy is indicated^[3]. Here we report a case of recurrent infiltrating angiolipoma of right thigh which was treated with surgery and adjuvant radiotherapy.

Case Report

A 31 year old female, presented with right thigh swelling, underwent the surgery for the same in 2014. Her Histopathological report suggested infiltrating angiolipoma. She defaulted for follow up for 3 years. In 2017 she underwent Embolisation and excision for recurrent thigh swelling elsewhere. Her Histopathology report was suggestive of lobules of mature adipocytes with numerous thick and thin walled vessels

surrounded by spindle cells. No features of sarcoma were seen. Suggestive of Recurrent Infiltrating Angiolipoma. (Fig 1)

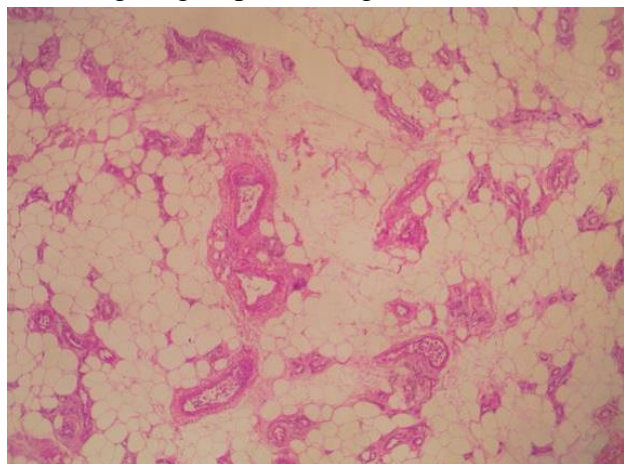


Fig 1: Histopathological slide view showing adipocytes with vessels surrounded by spindle cells.

Her post-operative MRI was suggestive of residual enhancing mass lesion measuring 13x12.89 cms extending along the subcutaneous plane and superiorly along gluteal region and infiltration seen along lateral compartment muscle. Post gadolinium T1 shows heterogeneous enhancement suggestive of recurrence of lesion (Fig 2).

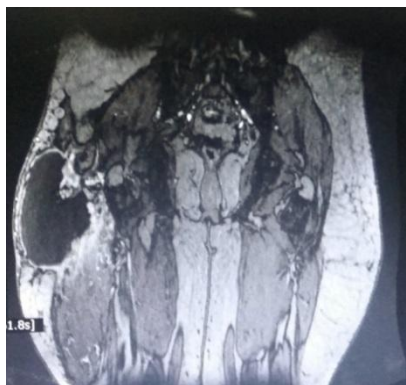


Fig 2: Post Gadolinium T1 sequence showing enhancing lesion in right thigh.

This case was discussed in the Joint Tumour Board Clinic. Patient was advised Re excision but she was not willing, hence she was offered Radiotherapy, keeping excision for Salvage purpose. She was planned for Adjuvant Conformal radiotherapy and received a total dose of 60Gy in 30 fractions to the right thigh

residual lesion from 16th May 2017 to 27th June 2017. She tolerated the treatment except for Grade II/III skin reactions.

Post radiation follow up at 3 months, MRI right thigh was suggestive of significant decrease in right thigh collection, interval decrease in lobulated soft tissue along the tract and Interval decrease in STIR hyperintensity in vasti muscles- Likely post radiation changes. (Fig 3)



Fig 3: MRI right thigh (Post RT 3 months) showing subcutaneous and myofascial edema.

At 7 months follow up MRI right thigh (29/1/2018) was suggestive of collection in proximal thigh region at the greater trochanteric region measuring 3.53 x 1.83 cms with enhancing walls with inferior extension of the sinus tract and no evidence of residue or recurrent lesion. (Fig 4)

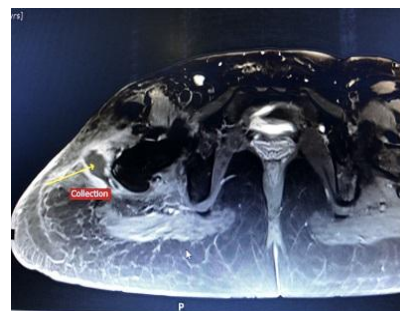


Fig 4: MRI of right thigh (post RT 7 Months) showing collection.

Patient is symptomatically stable with normal vitals and limb movements.

Discussion

Angiolipomas are classified as infiltrating and non-infiltrating. Lin and Lin initially reported this classification. The nature of these lesions was first documented in 1960 by Howard and Helwig who

reported a large series of cutaneous angioliomas^[4]. Infiltrating subtypes show infiltration of the local muscle and neuro vascular structures. Age of onset is usually after puberty, average age of onset is 21 to 30 years. It is often painful and located in subcutaneous tissue, sometimes multiple in number. MRI scans are preferred specifically to identify the nature of soft tissue lesions and its involvement to the surrounding tissues. In our case we performed MRI, which showed proximal lateral aspect of thigh region with enhancing infiltrating mass lesion, Infiltration seen along lateral compartment. Histopathologically, angiolioma has distinct morphological features that consist of mature adipose tissue with numerous small blood vessels, which are capillaries. Our case report had lobules of mature adipocytes with numerous thick and thin walled vessels surrounded by spindle cells.

Surgical excision is the treatment of choice. In cases with recurrence, surgery with adjuvant radiotherapy is the treatment of choice. In our case report post-operative MRI suggested proximal lateral aspect of right thigh collection with peripheral rim of enhancement, lesion measures 13x12.89cm with the residual nodular enhancing lesion noted surrounding the cavity extending upto the periosteum and superior extension along the gluteus, which was treated with surgical excision followed by radiotherapy.

Differential diagnosis include lipoma and liposarcoma, to arrive at proper diagnosis and clear margin frozen section with surgical excision is required^[5]. Lipomas are soft, mobile, and painless and are usually cured by simple excision. The conventional lipoma, the most common subtype, is a well-encapsulated mass of mature adipocytes that varies considerably in size. It arises in the subcutis of the proximal extremities and trunk, most frequently during mid-adulthood. Infrequently, lipomas are large, intramuscular, and poorly circumscribed. Histologically, they consist of mature white fat cells with no pleomorphism. Histologically, liposarcomas can be divided into well-differentiated, myxoid, round cell, and

pleomorphic variants. The cells in well-differentiated liposarcomas are readily recognized as lipocytes. In the other variants, most of the tumor cells are not obviously adipogenic, but some cells indicative of fatty differentiation are almost always present. These cells are known as lipoblasts, they mimic foetal fat cells and contain round clear cytoplasmic vacuoles of lipid that scallop the nucleus. Our case report was negative for lipoblasts.

Conclusion

Infiltrating angiolioma is a rare neoplasm with only 23 previously reported cases^[3]. Infiltrating angiolioma is rare but has potential to cause pain in young adults. Radiological investigations are helpful to assess infiltration of surrounding tissue and vascularity of the lesion. Surgical excision and histological examination of the lesion are warranted to confirm diagnosis as the lipoma and liposarcoma mimic infiltrating angiolioma, followed by adjuvant radiotherapy^[6]

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