Case Report: Aneurysmal Fibrous Histiocytoma on the Back

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INTRODUCTION

Dermatofibroma is one of the most common subcutaneous dermatologic tumors. In its classic variant, a dermatofibroma is easily recognized by dermatologists. However, numerous variants of the dermatofibroma have been identified which oftentimes do not present with a classic clinical picture. Aneurysmal fibrous histiocytoma, one of these variants, is not easily recognized given its bizarre growth and potentially malignant appearance. Microscopically, aneurysmal fibrous histiocytoma can be difficult to identify as the lesion will display some similarities to a classic dermatofibroma along with distinguishing characteristics like large blood-filled cavernous spaces. Aneurysmal fibrous histiocytoma is a benign lesion with a low risk for recurrence if adequately excised. On this poster, we will present a case of aneurysmal fibrous histiocytoma and review the current literature on this rare dermatofibroma variant.

CASE REPORT

A 28-year-old healthy male presented to the clinic for evaluation of an enlarging nodule on his right scapula. He reported that it had been present for about one year and initially appeared as a 1-2 mm purple papule. It slowly grew for the first 6 months and then rapidly enlarged in size over the last half year. The patient regularly lifted weights and stated that often the squat bar rubbed against the nodule, but it had never ruptured or bled. He reported no pain with the lesion unless firmly palpated. He had no family history of cutaneous malignancy.

On physical examination, this patient presented with a 3.2 x 3.2 cm purple, erythematous, slightly scaly, well-circumscribed, spherical nodule with minimal surrounding erythema that was slightly elevated, and has an accelerated growth phase.1 It is thought to be due to vast hemorrhage within the lesion.1 Patients usually do not complain of pain or tenderness. While aneurysmal fibrous histiocytoma tumors can present in various locations such as the head, neck, and trunk, they are more commonly seen on the extremities.2 Aneurysmal fibrous histiocytoma portrays less than 2% fibrous histiocytoma.3 The clinical appearance of aneurysmal fibrous histiocytoma potentially creates a scenario in which the clinician fears a more severe prognosis and not a fibrous histiocytoma. With the rapid changes occurring in the aneurysmal fibrous histiocytoma tumor, one must consider conditions such as malignant melanoma, nodular Kaposi’s sarcoma, dermatofibrosarcoma protubersans, spindled cell hemangioendothelioma, and angiosarcoma in the differential diagnosis.3,4,5 Histologically, aneurysmal fibrous histiocytoma varies from the common fibrous histiocytoma because of the large blood-filled spaces owning up to one-half of the tumor. These spaces appear from thin clefs to broad gaping cysts lacking an endothelial lining and can be either focal or involve most of the lesion.6,7 Aneurysmal fibrous histiocytoma usually contains some solid areas that look like the common fibrous histiocytoma given the hypercellularity.5 One can visualize numerous small capillaries in the stroma that have the potential to hemorrhage and deposit hemosiderin.4 Mitoses can be visualized, but atypical mitotic figures are not expected.6 Because aneurysmal fibrous histiocytoma can present histologically in a variety of ways, one must distinguish it from other vascular or fibrous tumors such as dermatofibrosarcoma protubersans, Kaposi’s Sarcoma, and angiomatoid malignant fibrous histiocytoma.7 Aneurysmal fibrous histiocytoma does have a good prognosis, but there is a high potential for recurrence, up to 19%.4 This recurrence rate is significantly higher than common fibrous histiocytoma, which occurs in less than 2%.8 Most likely this is due to an incomplete removal of the tumor given its large size and not necessarily because of a biological component.6 Regular reevaluations are thus recommended to ensure that the aneurysmal fibrous histiocytoma does not recur.

CONCLUSION

Aneurysmal fibrous histiocytoma is a rare variant of the fibrous histiocytoma. While it is benign, the lesion can appear malignant and one should consider an excisional biopsy to rule out other malignant conditions, such as malignant melanoma, nodular Kaposi’s sarcoma, and angiosarcoma. Histologically, aneurysmal fibrous histiocytoma will present with large cavernous blood-filled spaces along with hypercellularity that is seen in the classic fibrous histiocytoma variant. Our patient had regular repeated trauma to the lesion from frequent pressure from a squat bar. We believe that contributed to the rapid growth of the lesion because of the increased hemorrhage. While not all cases of aneurysmal fibrous histiocytoma will present in size from repeated trauma, we do consider this as a potential cause for rapid growth in some. Given its propensity to recur if not adequately excised, we recommend regular, long-term reevaluations to ensure it does not redevelop.