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Recurrence of Radiation associated Angiosarcoma in an irradiated breast.

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Introduction.

Breast conserving surgery has become a procedure of choice nowadays for early breast cancer. Therefore, the patient will require adjuvant radiotherapy to the breast. However, there has been reported increased incidence of Radiation Associated Angiosarcoma (RAAS).

Angiosarcomas of the breast are malignant tumours derived from the vascular endothelium and can be primary or secondary to radiotherapy.RAAS is very rare with a reported incidence of less than 0.05% among malignant breast tumours. The highest incidence occurs in the first 5 to 10 years after radiotherapy, while other types usually present more than 10 years afterward.

Angiosarcomas are associated with a poor prognosis, thus early detection is vital. Even though no established standard treatment, wide surgical resection is still the mainstay of treatment with a negative margin for this type of tumours. We describe a rare case of a recurrence of Radiation associated Angiosarcoma (RAAS) of the left breast.

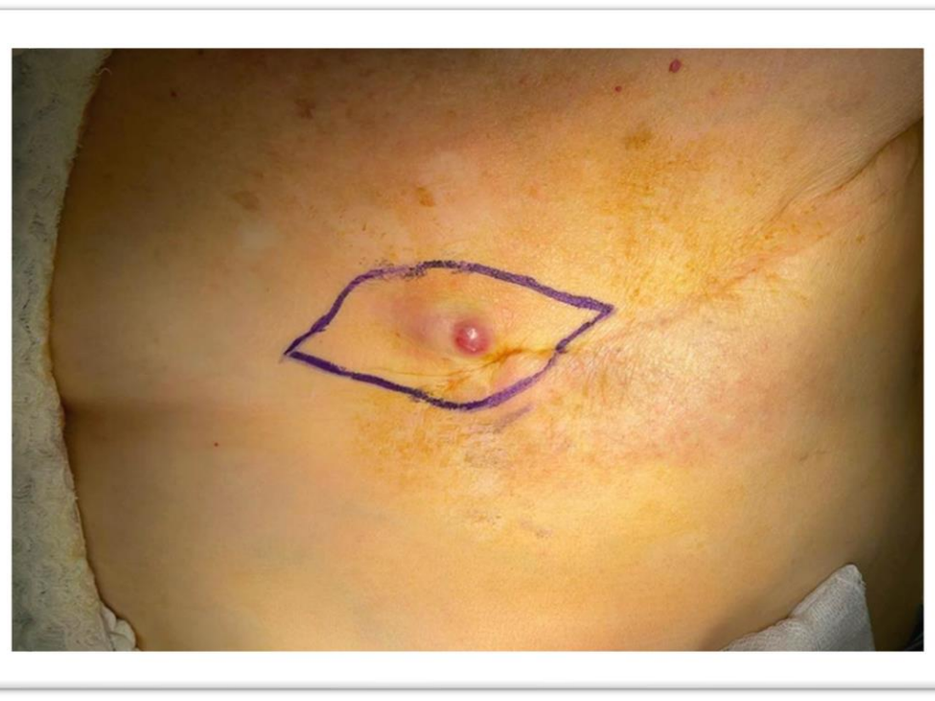

Figure 1.

Case Report.

The patient is a 82 years old lady who had a breast conserving surgery for High Grade Ductal Carcinoma In Situ (DCIS) followed by a radiotherapy in2009. Unfortunately, she developed a Radiation associated Angiosarcoma in 2019 and had a simple mastectomy doneand was on surveillance. Currently she presented with a nodular purplish lesion measuring 2 cm x 1cm at the medial aspect of the mastectomy scar (Figure 1).

A skin biopsy was taken and reported as a Dermal Angiosarcoma. A computed tomography (CT) scan of the thorax and abdomen showed no evidence of regional recurrence or metastasis. She underwent a wide local excision and histopathology was confirmed as RAAS with a negative margin.

As in this case, a skin biopsy is mandatory when a patient presents with a skin lesion after radiotherapy to exclude this condition. This case report serves as a cautionary example of the importance of considering breast RAAS in the differential diagnosis when investigating for recurrent breast tumours.

Discussion.

Radiation associated Angiosarcoma is a rare and aggressive form of skin cancer that can develop in previously irradiated breast tissue. It can occur several years after radiation therapy, with some reported cases occurring decades later. As in this case report it occur exactly 10 years after the initial radiation therapy.

Prognosis is generally poor with a 5 years disease free survival is at 40% and overall survival rate at 10-40%. It has been reported that a tumour size greater than 5 cm, advanced age, multiple skin lesions, and the histological grade of the tumour are associated with a poor prognosis.

Immunohistochemistry is useful for the diagnosis of this condition. It is closely correlated with MYC amplification, c-Myc, ERG and CD31 expression. MYC amplification is considered a marker of poor prognosis and has been identified in 55% of primary angiosarcomas and up to 100% of secondary angiosarcomas. Among these, MYC amplification is a promising marker in radiation-associated breast angiosarcoma. In this case, c-Myc was diffusely positive, as well as ERG and CD31 positivity which led to the diagnosis.

Although there is no established evidence-based standard of care for adjuvant therapy, chemotherapy based on doxorubicin, paclitaxel, docetaxel, and radiation therapy are commonly used. Paclitaxel is commonly used to treat unresectable and metastatic angiosarcoma, and pazopanib, a tyrosine kinase inhibitor, and bevacizumab, an anti-VEGF antibody, are considered second-line therapies . Paclitaxel is considered very effective against angiosarcoma. However, in this case, patient was not given any adjuvant therapy after the wide local excision mainly because the age as a limiting factor.

References.

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