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RESEARCH ARTICLE

BREAST LYMPHOMA

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Abstract

Primary breast lymphoma is a very rare histological entity of breast cancer. The Clinical and radiological aspects do not present any particular specificities. Diagnosis is often delayed. The treatment is mainly based on chemotherapy. We report the case of a patient with high grade malignant non-Hodgkin lymphoma. The symptomatology was made of breast swelling. The remote extension assessment was negative. The patient received 6 courses of type R mini CHOP chemotherapy followed by three-dimensional radiotherapy with a dose of 30 Gy in 15 fractions for 3 weeks. An echo mammography in between treatment showed: a partial response at 50%. Controle PET CT scan performed 3 weeks after the last cure having objectified: Complete disappearance of the active subcutaneous nodule at the level of the QSE of the right breast. Breast localisation of lymphoma is very rare. His prognosis was considerably improved due to a multidisciplinary approach.

Introduction:-

Primary mammary lymphoma is a rare and particular entity due to its location and the diagnostic difficulty it can pose to the clinician. Once the diagnosis is made, the management does not differ practically from other localizations, based on chemotherapy. We report here three cases of mammary lymphoma, through which we recall and discuss the main diagnostic and therapeutic particularities of this localization.

Observation:-

This is a 76-year-old patient with a history of: Diabetic type 2 on insulin and hypertensive. She consulted for the perception of a breast nodule on self-examination of the breast at the level of the QSE of her right breast

Senological examination finds a nodule of 2 cm at the JQS level, fixed, not painful

Echo-mammography having objectified a tissue lesion of the JQS of the right breast, very hypoechoic heterogeneous, with vessels within it, with poorly limited contours, surrounded by a hyperechoic halo, with an oblique long axis measuring 14 mm, suspicious, classified ACR4b, however, given the context of his diabetes, an

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infectious lesion remains probable. Axillary formations, well differentiated, with hyper echogenic center, oval, infra centimetric.

Bilateral canal dilation more marked on the right with echogenic formation that may be related to a bud, to be completed by galacto-MRI.

Breast magnetic resonance imaging which revealed a tissue lesion at the level of the upper outer quadrant of the right breast of a tissue lesion, presenting in T1 and T2 heterosignal, poorly limited fuzzy contours presenting an enhancement curve in plateau and measuring 18/10 mm. Presence in right retro-areolar of a bilobed solidocystic lesion measuring 20/10 mm, presenting a plateau enhancement curve, its limits are clear and regular, it continues with a galactophoric duct structure. Presence of a few right axillary adenopathies, presenting a fatty center, not suspicious.

A biopsy of the nodule was performed showing strong expression of CD 20 and CD79a diffusely. CD3 is expressed by many isolated cells

KI 67 is estimated at nearly 90%. No expression of CD 10 in tumor cells. No expression of epithelial markers cytokeratin and epithelial membrane antigen. Histological and immunohistochemical appearance of a high-grade malignancy NHCL, phenotype B, and diffuse large-cell type, sub-germinal center type. Its primary or secondary origin must be determined in comparison with clinical and radiological data.

A staging assessment including a PET-CT with 18 FDG having objectified a

Pathological subcutaneous hypermetabolic nodular focus at the level of the QSE of the right breast (SUVma.=8.9), measuring 19 mm on the long axis. Absence of pathological hypermetabolic lymph node focus in other supra-diaphragmatic lymph node areas. 18FDG PET-CT scintigraphy reveals: A pathological hypermetabolic nodular focus in the right breast, with no other suspicious active focus in the rest of the volume explored. Absence of argument in favor of active visceral or bone marrow involvement. (FIGURE 1)

The indication of chemotherapy was retained in a multidisciplinary oncology consultation meeting. The patient received 6 courses of induction chemotherapy based on 6 R mini CHOP: rituximab, cyclophosphamide, doxorubicin, and vincristine.

A new echo-mammography in inter cure showed: a partial response at 50%

A control PET CT scan performed 3 weeks after the last cure having objectified: Complete disappearance of the active subcutaneous nodule at the level of the QSE of the right breast. Absence of suspect active hearth on the level of the other known diaphragmatic lymph node areas. Compared to the 18FDG PET-CT examination of 9/17/2020, we note: A complete metabolic response with the complete disappearance of the pathological hypermetabolic subcutaneous nodule of the right breast. The non-appearance of a new suspicious active focus in the rest of the explored volume (FIGURE 2).

The file was restaffed in a multidisciplinary oncology consultation meeting with the decision to complete with radiotherapy.

The patient received external radiotherapy with a total dose of 30Gy, at the rate of five fractions per week, 2 Gy per fraction using the three-dimensional conformal radiotherapy technique (figures 3 and 4), 2 Gy per fraction in 15 fractions during 3 weeks.

Clinical monitoring ‘breast examination + examination of lymph node areas and radiological monitoring ‘by echo mammography’ was unremarkable.

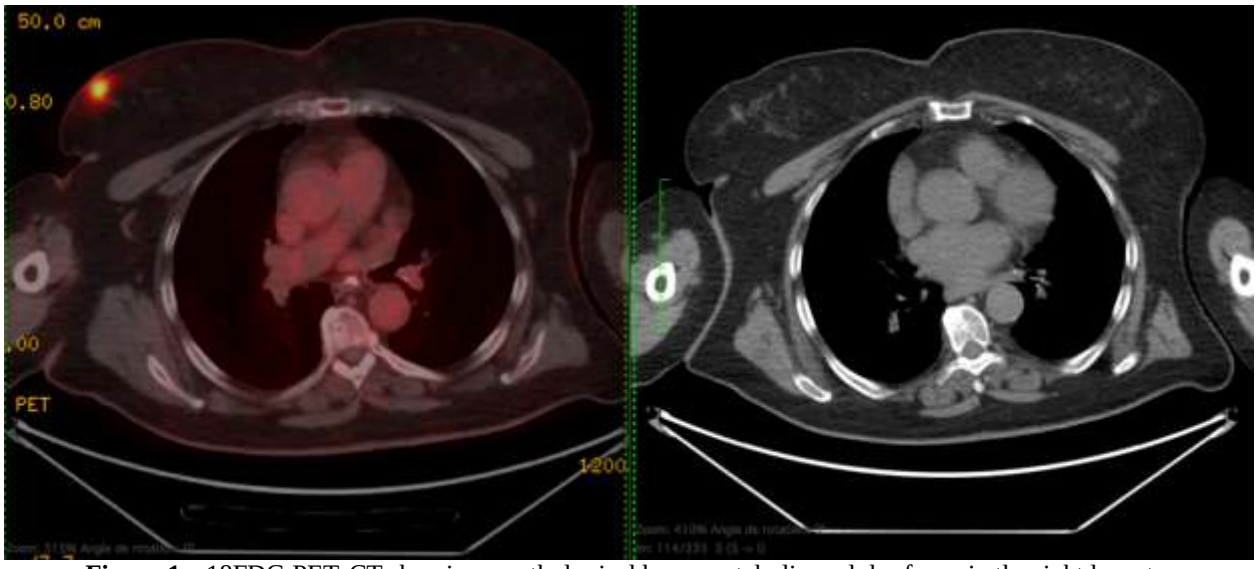


Figure 1:- 18FDG PET-CT showing a pathological hypermetabolic nodular focus in the right breast.

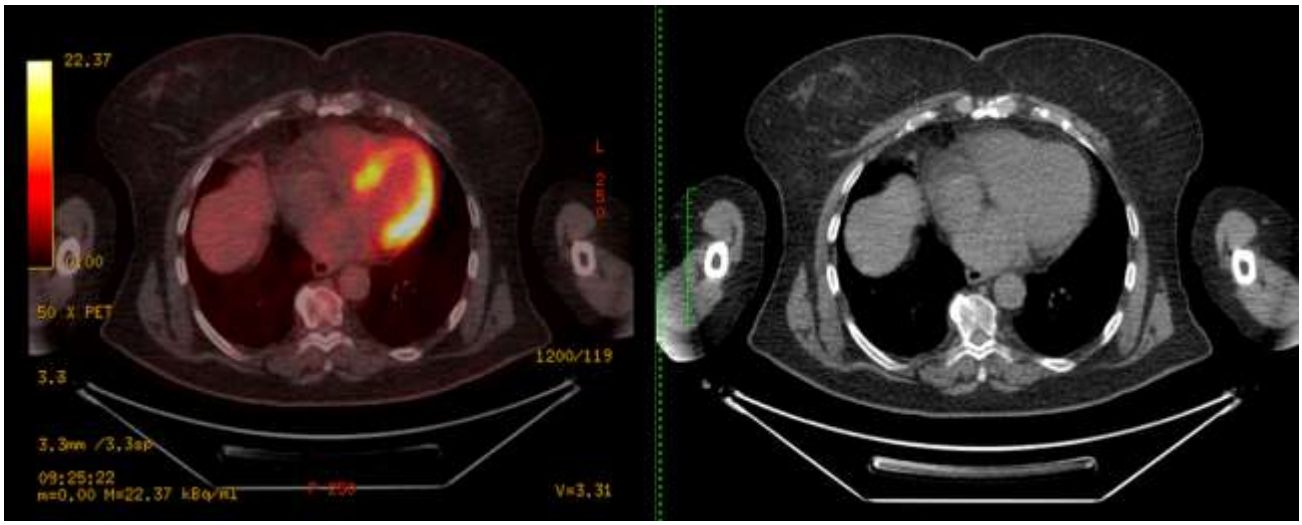
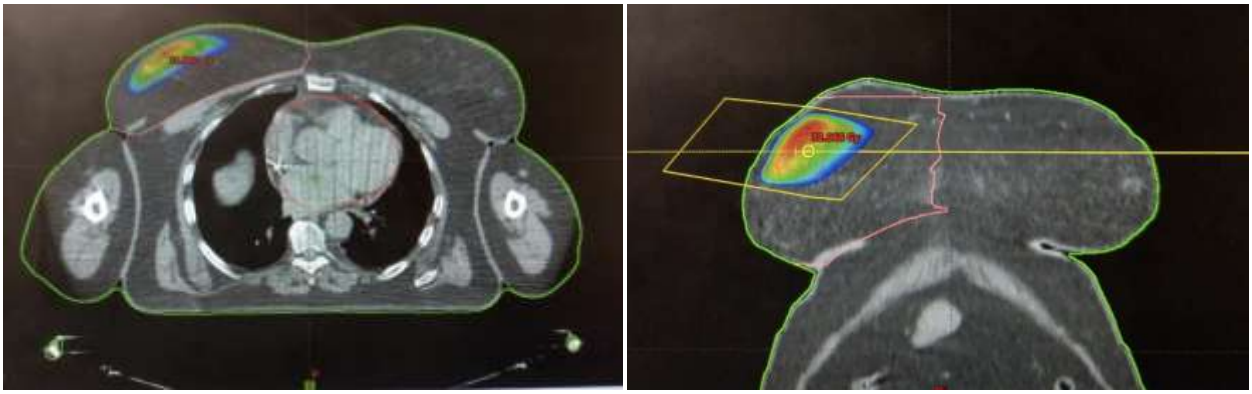


Figure 2:- 18FDG PET-CT showing a complete metabolic response with the complete disappearance of the pathological hypermetabolic subcutaneous nodule of the right breast.



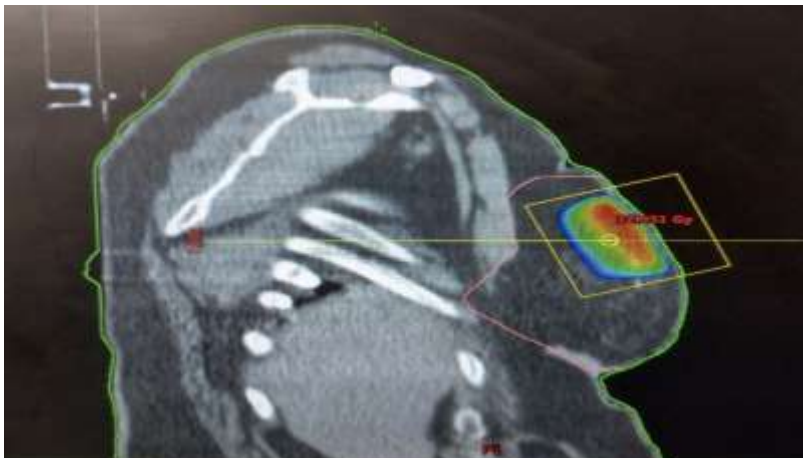


Figure 3:- Axial, sagittal and coronal sections showing the dose distribution at the target volume.

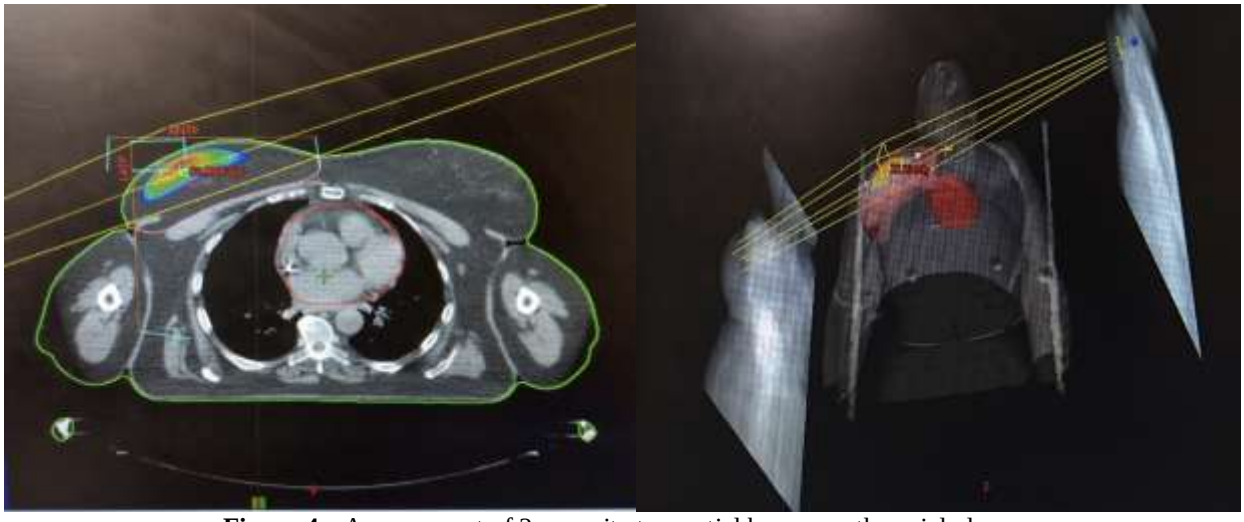


Figure 4:- Arrangement of 2 opposite tangential beams on the axial plane.

Discussion:-

Primary breast lymphomas are rare. Their frequency is estimated at 0.04 to 0.52% of all breast cancers and 2.2% of extranodal lymphomas [1, 2]. This pathology generally affects women. Regarding age, two frequency peaks have been noted, a first peak in young women of childbearing age often during pregnancy, the second is more important between 50 and 60 years and has a more favorable prognosis. [3].

The attack is often unilateral. In 18% of cases, it is bilateral. The mode of revelation is almost always the development of breast swelling [3, 4] as was the case in our patient, very often also by unilateral or bilateral gigantomastia with a state of inflammatory mastitis [2]. Axillary adenopathy is found in 20 to 40% of cases [5].

The imaging appearance is non-specific. The mammogram often shows a well-limited mass of homogeneous density with a benign appearance, evoking a cyst, a fibroadenoma or a phyllodes tumor. Less frequently, it is an appearance of mastitis with diffuse increase in breast density, a mass with ill-defined contours or a mass with spiculated contours [6]. Rarely, we note a suspicious aspect of malignancy, but there is never stellar opacity or microcalcifications [3]. On ultrasound the presentation is not specific, most often in the form of a homogeneous hypoechoic mass with clear and regular contours. Rarely an aspect of mastitis is observed on ultrasound.

The diagnosis is cytological or histological after microbiopsy or surgical biopsy [7]. The use of immunohistochemistry makes it possible to decide on the absence of expression of epithelial markers (EMA,

cytokeratin) and the immuno-expression of lymphoid markers [8]. The most common histological type is diffuse large B-cell lymphoma. Low-grade MALT-type lymphoma comes second in incidence order [2].

The treatment of primary LMNH of the breast can be superimposed on that of other lymphomatous localizations. Multiple protocols have been proposed in the literature [8]. Currently, the majority of authors recommend chemotherapy based on Endoxan®, Oncovin® and Prednisone® or associated with immunotherapy with anti-CD20 antibodies.

The prognosis of breast LMNH is particularly poor. The histological type and the clinical stage of the disease are the two main prognostic factors.

Conclusion:-

Primary breast lymphoma is a rare pathology. Its clinical symptomatology is polymorphic. Medical imaging is non-specific. The definitive diagnosis is histological. The diagnosis of a PML requires a careful extension assessment. The prognosis and treatment are similar to those of other lymphomatous localizations.

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