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RESEARCH ARTICLE

ABOUT A PARTICULAR BREAST TUMOR OF A MAN: A CASE REPORT.

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Abstract

Breast localizations of cancers of extramammary origin are infrequent. They represent for 0.5 to 6.6% of all breast cancers and affect mostly women. We report an exceptional case of secondary breast localization of a tumor for a man.This is a 74 year old man who presented a retro-areolar mass. Mammary scan found a suspect and bilateral axillary adenopathies. The histological study of the mammary biopsy performed revealed a monomorphic malignant tumor proliferation of round cells. The immunohistochemical study showed cytoplasmic expression of the tumor cells of the anti-CD138 antibody, CD79a and anti-kappa light chain. The examination and bone marrow biopsy made it possible to make the diagnosis of mammary localization of a multiple myeloma with a light chain kappa. The extramedullary sites of the MM are uncommun and are found exceptionally in the breast and even more in a man.

Introduction:-

Breast localizations of cancers of extramammary origin are infrequent (1). They represent for 0.5 to 6.6% of all breast cancers (2) and affect mostly women (3). We report an exceptional case of a 74 year old man with secondary mammary localization of multiple myeloma (MM). MM is a clonal neoplastic proliferation of plasma cells of bone-marrow, usually multiccentric (4). It accounts for about 1% of all cancers. It is more common in men than in women (5).

Case presentation

It was a 74 year old man who presented a retro-areolar mass. It had of hard consistency, painful at palpation and adherent to the superficial plane. Mammary scan found a heterogeneous breast tissue formation of suspect nature and bilateral axillary adenopathies of millimeter size. The histological study of the mammary biopsy performed revealed a monomorphic malignant tumor proliferation of round cells of medium size arranged in dense clusters or compact. Tumor cells were round, have regular contour, hyperchromic nucleus with a prominent nucleolus. It was most often eccentric and sometimes central. The cytoplasm was abundant eosinophilic (Figure 1).

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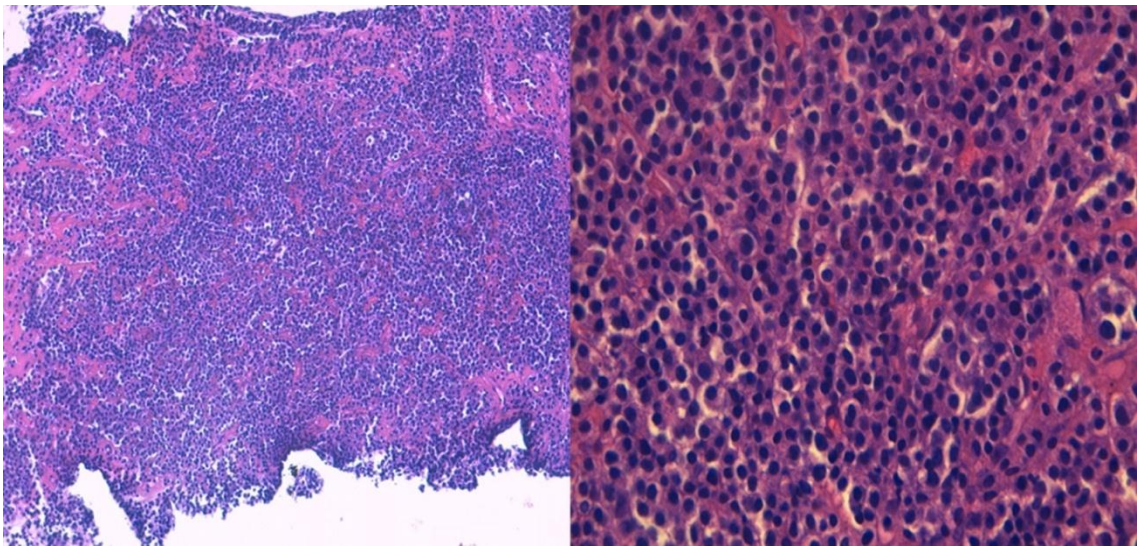

Figure1:-Hematoxylin and eosin stain. **A,** Monomorphic malignant tumor proliferation of round cells of medium size arranged in dense clusters or compact. **B**, Eccentric nucleus and abundant eosinophilic cytoplasm.

The immunohistochemical study showed cytoplasmic expression of the tumor cells of the anti-CD138 antibody, CD79a (Figure 2) and anti-kappa light chain (Figure 3).

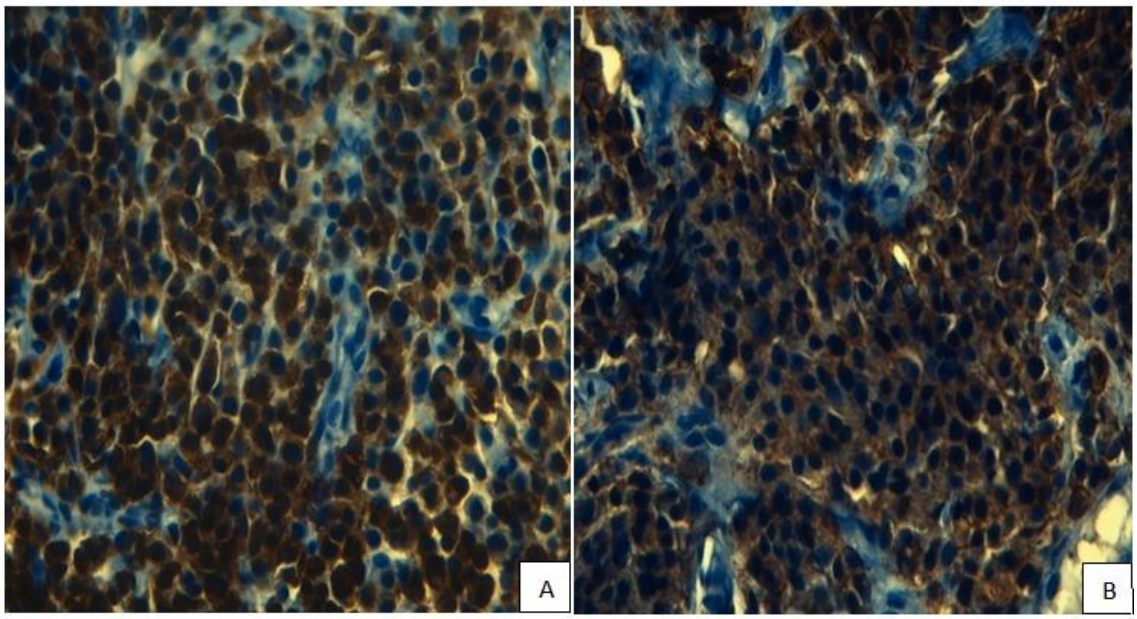

Figure2:-Immunohistochemistry. **A**, Cytoplasmic expression of tumor cells with anti-CD 79a antibody. **B**, Cytoplasmic expression of tumor cells to anti CD 138 antibody

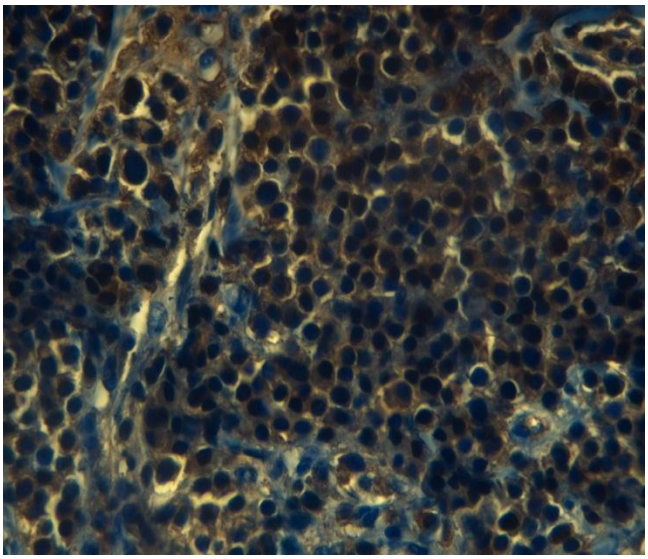

Figure 3:-Immunohistochemistry. Cytoplasmic monoclonal expression of the kappa light chain.

The examination found a bone pain evolving since 7 months. A bone marrow biopsy performed found an identical tumor proliferation. The diagnosis of mammary localization of a multiple myeloma with a light chain kappa was retained.

Discussion:-

The mammary glands are rarely affected in patients with a typical bone manifestation of MM. In an inventory of breast metastases of cancers of extra-mammary origin carried out in 2013, the primary cancers found in decreasing order of frequency were melanomas, bronchopulmonary cancers, gynecological cancers, digestive cancers, leukemias and lymphomas, sarcomas and renal cancers (3). When patients had a history of known cancer, the average time to onset of metastasis was 30 months, with extremes ranging from 1 month to 22 years (3). In our case it occurred 7 months after the clinical manifestations of the primary tumor. The mean age at diagnosis was 50 years with extremes ranging from 12 years to 92 years (3). Our patient is 74 years old. The average age of patients with MM diagnosis is around 68 years in men and 70 years in women (4). Secondary mammary sites generally present as masses of one to several centimeters, rapidly growing, very limited, round, firm, painless and predominant in the super-external diaphragm of the breasts without retraction of the breast or skin due to the extra- ductal. The left breast is invaded more often than the right breast and bilateral (3). In our patient it was a mass retro-areolar, painful to the palpation of the left breast without nipple retraction**.** At the imaging also the signs are not specific. The diagnosis is established by the anatomopathologist (3). The glandular structures are largely erased in the breast metastasis. Multiple myeloma manifests a board spectrum of morphological features. Well-differentiated tumors show dense plaques of cells resembling normal plasma cells. The cells have an abundant, eosinophilic, dense cytoplasm with regular contours. The nucleus is eccentric, with chromatin condensed at the periphery, often showing a wheel appearance and a prominent nucleolus. Mitosis is rare. The cytological characteristics are better observed at Giemsa staining where the cytoplasm is basophilic with a clear perinuclear zone (4). The cells of the moderately differentiated tumors have a nucleus with less dense chromatin and a prominent nucleolus with an indistinct cytoplasmic membrane. Undifferentiated tumors show larges cells lympohma or leukaemia with a high number of abnormals mitoses (4).

On the immunohistochemical level, MM cells express the CD138 and CD38 antibodies (6). The monotypic expression of immunoglobulin kappa or lambda by tumor cells establishes the diagnosis (4). The molecular study of the genes coding for Immunoglobulin shows a rearrangement. A deletion is usually associated with the Bence Jones protein (6).

On the prognostic side, MM is usually an incurable disease (median survival of 3 years with 10% survival at 10 years). The prognosis is unfavorable in case of breast localization with an average survival of about one year. Management is essentially palliative (3).

Conclusion:-

The extramedullary sites of the MM are uncommun and are found exceptionally in the breast and even more in a man. The diagnosis is established by a histopathological and immunohistochemical studies and need a good anatomo-clinical and biological correlation.

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