Papillomatosis and breast cancer: a case report and a review of the literature

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Abstract. – Papillomatosis is a relatively common (22%) benign microscopic lesion in the breast and rarely seen in women less than 30 years old. It is a papillary proliferation of the ductal epithelium which partly fills up smaller ducts and to degree distends them. The histological classification of this entity is controversial because similar or identical lesions have been classified using different terms such as epitheliosis and epithelial hyperplasia, and interpretation of published series has been difficult due to imprecise definition of this term. Clinical, radiological and histological patterns of this entity are often sufficient to raise concern as to possible malignancy.

Moderate or florid hyperplasia without atypia is considered to carry slight (1,5-2 times) increase in risk of later developing cancer, while in the atypical hyperplasia the risk is four to five times that of the general population.

The authors describe a case of papillomatosis recently observed in a 67 years old female patient and, confirmed the importance to establish an accurate preoperative diagnosis. It is important that the surgeon works with the pathologist to produce clear descriptive report of epithelial changes from normal through hyperplasia to atypias in order to establish a precise surgical indication.

Key Words: Papillomatosis, Breast cancer.

Introduction

The continuous increasing of breast cancer incidence in the western countries has increased the necessity to identify women with a high risk of disease, who can nowadays take advantage from a careful screening and follow-up.

In this regard, the prognostic significance of some benign breast lesions, is still subject of debate, as the lack of uniform classification criteria, and the common use to understand with the terms of “fibrocystic disease” or “chronic cystic mastitis” a wide spectrum of physiological and pathological variations makes difficult the comparison of the different studies.

The authors taking occasion from a case of papillomatosis in senile age of a recent observation, who presented such clinical-diagnostical aspects to make difficult the differential diagnosis with the cancer, compare the emerged data from the revision of literature with their experience, agreeing upon the real difficulty to come to an exact preoperative definition of the lesion. This is on the contrary necessary to put an exact surgical direction to curative and preventive purposes.

Clinical Case

C. R., a 67 years old woman, arrived at our observation, complaining for about a year the appearance of moderately aching nodules, in the outside quadrant of the right breast.

From a remote pathological anamnesis turned out only a 10 years before practised operation for a bilateral breast fibro adenoma.

After an objective local examination, the right breast presented a good consolidated and epithelialized surgical cicatrice of a preceding operation with lack of teat and areola.

In the corresponding of internal superior quadrant (ISQ) area, are to appreciate moderately, round, aching tumefactions of about
1-2 cm in diameter of hard fibrous consist-
tence with shaded borders, floating on super-
ficial and deep layers.

In the external superior quadrant (ESQ) is
to palpate a more voluminous formation with
a polycyclic surface and with the same charac-
teristics of the previous.

The overhanging skin is undamaged and
the touch temperature is negative. There
aren’t perceptible lesions on the opposite
breast, lack of bilateral axillary lympho-
adenopathies.

Among the instrumental examinations the
breast radiography shows a remarkable mor-
phological difference between the two
breasts:

– on the left it shows a breast with a preva-
ience of adipose component and the image of
the fibro glandular share in the rear areolar
seat and in the ESQ without micro calcifi-
cations or suspicious images;

– on the right it shows the presence of mul-
tiple nodular formations, in the outside and
upper quadrants, with clear borders and lob-
ulated margins of homogeneous radiopacity,
between 4 and 20 mm in diameter.

In the ESQ, where the picture is clinically
clearer, the formations result conglobated
among them and that of the largest in diame-
ter, some coarse calcifications are evident
(Figure 1).

The ecography gives a definition of the
structure partly solid, partly mixed in particu-
lar that localized in ESQ, that appears
aneogenous, inhomogeneous and with pari-
etal, focal thickness of about 5 mm. A lways in
the ESQ, near the before described new for-
mations, one sees a parenchymal inhome-
geneity of about 30 mm, producing an
acoustic hinder obstruction. In the external
inferior quadrant (EIQ) is evident another
area with an inhomogeneous ecostructure
with irregular borders of about 15 mm
(Figure 2).

On the ground of such reports, a surgical
indication is suggested, excluding a needle
biopsy and on the contrary recognizing the
exigency of histological extemporary exami-
nation, in order to direct the surgical tactics.
The operation shows many cystic formations
of different sizes, gathered in cluster with a
severe surrounding phlogistic reaction inter-
esting a large part of the glandular parenchy-

Figure 1. Rx mammography: on the right side multiple
nodular formations scattered in the outside and upper
quadrants, with clear borders and lobulate margins, of
homogeneous radiopacity, between 4 and 20 mm in di-
ameter. In the ESQ, where the picture is clinically
clearer, the formations result conglobated among them
and that of the largest in diameter, some coarse calcifi-
cations are evident.

ma. A total excision of the mass is per-
formed and its extemporary examination on-
ly shows the presence of a flourishing papillo-
matosis in a diffused fibrocystic mastopathy
context.

The postoperatory course has been regular
and patient is clinically recovered discharged
and the final histopathological examination
proves the extemporary one with absence of
atypical symptoms (Figure 3).
Figure 2. Ecography: in the ISQ is evident another area with an inhomogeneous ecostructure with irregular borders of about 15 mm.

Figure 3. Dilated ducts in which proliferate papillomatosis structures dendriform with a stromal vessel connective axis coated by a monosratal epithelium of cylinder cells (ductals) (EE 100x).
Discussion

Breast papillomatosis defined also epitheliosis or epithelial hyperplasia, is a proliferation of the ductal epithelium, plugging the lumen of the littlest ducts till to spread it out. Women in perimenopause are prevalently affected, also if in 1980 Rosen and coll described a kind of “juvenile papillomatosis”. During the fine needle ago-biopsy (FNAB) its incidence varies between 20 and 30 % and can be associated to cystic disease pictures or to breast fibrosis or to sclerosing adenosis. The histological aspect is dominated by the presence of epithelium, stratified on more files to plug the lumen of the little ducts. Extended and ovoidal cells, typically disposed in irregular spaces, mostly constitute such epithelium. Nuclear atypies aren’t to observe and rare is the presence of a mitosis or of necrotic areas, while frequent is the presence of little amasses of histiocytes with foamy cytoplasm.

Sometimes it is also associated to little amasses of calcium sediments. The epithelial hyperplasia can be divided in three different degrees: light, moderate and strong.

We talk of light hyperplasia when the number of cellular layers above the basal membrane varies between 2 and 4 layers; of moderated hyperplasia when the number of the layers varies between 5 and 10; and of strong hyperplasia when the cells are disposed on more than 10 layers. Sometimes it’s very difficult to distinguish the epithelial hyperplasia from a ductal carcinoma. The nuclear and cytological characteristics are helpful for a differential diagnosis as well as the characteristic forms of intercellular spaces, but in some cases the differential diagnosis is extremely difficult, when not impossible. In these cases the pathologists adopt the term of atypical epitheliosis. It’s important to consider that the epithelial hyperplasia is insignificant on a clinical level, concerning macroscopically not valuable lesions, that are always recognized histological as an occasional report, than associated to macroscopically valuable lesions as the fibro adenoma or the breast cysts.

The theory that the benign pathology of breast increases the risk of a carcinoma was supported for many years. In 1985, Dupont and Page have quantified the association between the subspecies of benign pathology and breast carcinoma, and observed that the risk is minimum for the not diffused pathology, but moderately increasing for the diffused one without atypies and higher for the atypical hyperplasia. In particular the risk of the development of a metachronous breast cancer appears increased of about 1,5-2 times regards the normal gland in the moderate epithelial hyperplasia and 4-5 times in the hyperplasia with signs of atypie. Further studies, also confirming a correlation between an epithelial hyperplasia with or without atypies and breast cancer report some relative risks inferior to that observed by Dupont and Page. The discordance can be ascribed to a different histological classification of the lesions used in the different institutes.

Recent studies confirmed the association between the proliferative diseases without atypies and atypical hyperplasia with the following risk of the breast carcinoma.

But the detailed characteristic of the atypical hyperplasia that gives the highest risk remains unclear. This should be higher above all among women in premenopause and with a familiarity to a breast carcinoma.

The formulation of a guideline for the screening of the breast carcinoma in the presence of such lesion seems important. Only with a close collaboration of surgeon, radiologist and anatomopathologist is possible to show the presence of cellular atypies and to recognize the factors that can alter the progression of an atypical hyperplasia to breast carcinoma. The therapeutic administration we followed in the exposed case was based on two criteria. First on the careful surgical indication in front of diagnostic doubt in a patient with a previous proliferative pathology, avoiding the possibility to make a preliminary biopsycal test, that for the extension of the lesion could give false negatives.

Second on the choice of the operation on the bases of the postoperative response, in our case a simple subcutaneous mammectomy. The operation is larger than the real necessity but it permitted or to annul or to avoid that neoplastic risk we have seen to accompany and have also an importance on these benign lesions.
References


