MAMMAGLOBIN IMMUNOSTAINING IN THE DIFFERENTIAL DIAGNOSIS BETWEEN CUTANEOUS APOCRINE CARCINOMA AND CUTANEOUS METASTASIS FROM BREAST CARCINOMA

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Summary

The differential diagnosis between cutaneous apocrine carcinoma (CAC) and cutaneous metastases from breast carcinoma is commonly difficult. Many times, clinical information is crucial in the final diagnosis, because help that can be obtained from immunohistochemistry is usually limited concerning this subject.
We used the antibody mammaglobin in order to study 10 cases of cutaneous metastasis of ductal breast carcinoma, and 2 cases of CAC. One of the CAC cases showed only scattered positive cells, while the other did not show any positivity. Four cases of metastatic breast carcinoma also showed scattered positive cells. In other five metastatic cases, positive cells were abundant, representing up to 60% of the tumoral cells. One case of metastatic breast carcinoma did not show any expression of mammaglobin at all. Although, more cases of CAC should probably be studied in the future before any categorical conclusion can be obtained, our results seem to indicate that a pattern of immunostaining with expression of mammaglobin in many cells would favor a metastatic origin of the tumor.

Key words: mammaglobin – apocrine gland carcinoma – metastatic carcinoma – ductal carcinoma – breast

Souhrn

Imunohistologický průkaz mamaglobinu v diferenciální diagnostice mezi apokrinním karcinomem kůže a kožní metastázou karcinomu prsu

Diferenciální diagnóza mezi apokrinním karcinomem kůže (AKK) a kožní metastázou karcinomu prsu je často obtížná. Spíše než imunohistologie může pomoci klinická informace.
Použili jsme protilátku mamaglobin k vyšetření 10 případů kožní metastázy duktálního karcinomu prsu a 2 případů AKK. V jednom z případů AKK byly pozitivní jen ojedinělé buňky, druhý případ byl negativní. Z 10 případů metastázy karcinomu prsu byly v 5 pozitivní buňky četné (až 60 % nádorových buněk), ve 4 byly pozitivní ojedinělé buňky a 1 případ byl negativní.
Jsme si vědomi, že by bylo v budoucnu vhodné vyšetřit více případů AKK než bude možno vyslovit kategorický závěr; naše výsledky však ukazují, že imunohistologický průkaz exprese mamaglobinu v četných buňkách nádoru může svědčit pro jeho metastatický původ.

Klíčová slova: mamaglobin – karcinom apokrinní žlázky – metastatický karcinom – duktální karcinom – prs

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Cutaneous apocrine carcinoma (CAC) is an elusive malignancy among the adnexal tumors. On the contrary to other adnexal tumors, the differential diagnosis with a cutaneous metastasis from a breast carcinoma is extremely difficult, up to the point that many reports emphasize how crucial the clinical information is. The immunohistochemistry has not been of much help in order to discriminate between both conditions. Many of these thoughts are presented in a recent article by Adámková et al. (3).

Mammaglobin is a relatively new antibody that intensively stains ductal breast carcinomas. Although the staining pattern with mammaglobin has been investigated in certain benign apocrine tumors, its expression has not been checked in CAC.

In this report, we investigated the expression of mammaglobin by two CACs, as well as by 10 cutaneous metastases from ductal breast carcinoma, in order to check if mammaglobin might help in the differential diagnosis between them.

MATERIAL AND METHODS

The cases were recovered from our archives, revising the hematoxylin-eosin slides.

We performed an immunohistochemical study in all the cases, with the monoclonal mouse anti-human mammaglobin antibody of DakoCytomation (Clone 304-1A5; code N1637), and with the Dako REAL EnVision detection system.

RESULTS

The details about the selected cases, including location of the tumors and gender and age of the patients are shown in table 1.

One of the CACs showed a common tubular morphology (Fig.1; bottom), while the second had a cribriform pattern (Fig. 1; top). This latter case has been reported on its own before (13).