Breast cancer and borderline ovarian carcinoma in young patients – case report

M. Gojnic[1], V. Dugalic[2], S. Vidaković[1], M. Papic[3], K. Jeremic[1], M. Pervulov[1], S. Milicevic[1]

[1]Institute of Gynecology and Obstetrics, Clinical Center of Serbia, University of Belgrade
[2]Institute for Surgery, Clinical Center of Serbia
[3]University Hospital "Narodni Front" (Belgrade, Serbia and Montenegro)

Summary

Cystosarcoma phyloides is a breast cancer with deterrent features because of its size and fast growth. Borderline ovarian tumors comprise 10% to 15% of all epithelial tumors of the ovary. Regardless of the tumor type (serous, mucinous, clear cell, Brenner, mixed) they can be benign, borderline or malignant. There is a close physiological relation between the breasts and genital tract. By routine examination of girls in secondary schools, suspected ultrasonography findings were found in two out of 180 examinees.

Key words: Cystosarcoma phyloides; Ovarian borderline carcinoma; Diagnosis; Surgery.

Introduction

Cystosarcoma phyloides is a breast cancer with deterrent features because of its size and fast growth. It is a fibroepithelial tumor appearing in conjunction with fibroadenoma, which may either precede it or be present simultaneously in the same or opposite breast. It has distinct epithelial elements and stroma. The stroma itself can be extremely different even within one tumor. Often stroma is not rich in cells so it resembles fibroadenoma. In other places, it can be anaplastic or sarcomatous. In some cystosarcomas the development of stroma is expressed to such extent that epithelial elements are almost invisible. They may look malignant, however in most cases they are not. A second important characteristic is the incidence of fissures covered by epithelium in fibroepithelial tumors. Mixed necrotic changes and hemorrhage may be found within these fissures. The tumor is covered by a number of larger sized cysts which are frequently filled by polypoidal masses protruding into the cysts. These degenerative changes present a microscopic appearance suggesting the diagnosis. These tumors usually do not have a capsule, they are softer than fibroadenoma and their surface is grayish, brownish, yellowish and dark red. Locally removed tumors may have recurrences.

Fibroepithelial tumors are usually present in older women but may appear in younger women. Moreover, they may be bilateral. The tumors are very progressive and may reach enormous size.

Some of these tumors may be true malignant tumors with metastasis with the possibility of killing their carrier. Tumors with more than two mitoses in the microscopic field are usually the ones with metastases. Metastases occur mainly in the lungs and bones, and rarely in the axillary lymph glands. The therapy is not a simple excision as in fibroadenoma. The recommendation is to remove the tumor with at least 15 mm of healthy tissue around it. It is not necessary to perform dissection of the axilla in view of the fact that metastasis into the axillary lymph glands is rare. In cases of local excision, recurrences are possible. If histopathological findings point to malignancy, complete mastectomy should be performed.

Borderline ovarian tumors comprise 10% to 15% of all epithelial tumors of the ovary. Regardless of the tumor type (serous, mucinous, clear cell, Brenner, mixed) they can be benign, borderline or malignant.

For borderline tumors, diagnostic criteria and an optimal therapeutic approach are yet to be determined. Borderline tumors are defined as changes which have some but not all morphological signs of malignancy. Macroscopically, they are similar to benign but finer, more fragile and emphasized papillary formations. In about 26% to 34% of cases they are bilateral.

Stratification of epithelial cells is present histologically and shows different degrees of atypia, polarity loss and a greater number of mitoses which characterize malignant tumors. However, there is no stromal invasion, and basal membrane integrity can be determined by antibodies to lamin and collagen IV. This is also the most important criteria for differentiation of borderline and malignant lesions.

Peritoneal and omental implants are found in about 16% of cases at the time of diagnosis but this does not exclude tumors from the borderline category.

Case report

By routine examination of girls in secondary schools, suspected ultrasonography findings were found in two out of 180 examinees. In both patients, aged 18 and 19, fibrocystic breast dysplasia was found, with ultrasonography registration of the process as a 'snowstorm' in the upper lateral quadrant of the left and/or right breast. Both patients had longer but regular menstrual cycles (32 days). Cystic tumefactions which did not impose malignancy by classical examination were found. As the patients had not had sexual relations, we performed a rectal

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examination but found no significant pathological changes. The only significant parameter that led us to a more detailed examination was the lower ovary resistance index (0.45 to 0.35 RI). Moreover, in both cases a positive family history related to breast malignancy was present. Each generation had a pathological entity. In one case, there was a positive family history of ovarian carcinoma. In both cases mammography and biopsy were performed. Also, CA 125 markers were examined in both patients. Even though no pathological markers were found, there were thrombocytoses in both cases, i.e. the number of thrombocytes was over 400,000. Ovarian cyst punctuation was performed but during the next cycle they formed again. Histopathological examination of the punctuation did not show pathologic cells. We decided to perform both surgeries at the same phase due to cystosarcoma fibroids of the breast observed at mammography.

The pathological tumefaction of the breast was removed together with the recurring cyst and capsule, and biopsies of healthy ovarian tissue and the other ovary were performed.

In both cases, borderline ovarian tumors were found. The treatment ended with surgery.

Discussion

How authoritative are markers and routine analyses? In a great number of cases, malignancies are found only when manifested clinically. By regular examination, with an appropriate differential diagnosis, morbidity and mortality could be avoided. Moreover, in the differential diagnosis we could not rely on all the parameters to confirm a pathological entity. In both cases we found microcystic dysplasia of the breasts related to a deficiency of progesterone and the existence of persistent follicles. The lower resistant index flow of the ovaries and more detailed patient history, together with negative markers, cytological findings and thrombocyte increase, induced two surgeries simultaneously. In the literature data, breast pathology is still a domain of oncologists, thus the necessity of it becoming of interest to gynecologists is more than obvious. Complete therapy ended by removal of the ovarian cysts and breast cystosarcoma phyloides.

Conclusion

There is a close physiological relation between the breasts and genital tract. Regular gynecological examinations should include breast examination. The role of Doppler imaging in establishing the diagnosis is inevitable. A search for a complete set of positive parameters to establish the complete diagnosis is not usual. Surgery is still a domain of oncology with the best results. All suspected ovarian changes demand a more detailed examination than generally used in practice. The incidence of borderline ovarian carcinoma is increasing in our country, even among the age population not included in risk groups. The only way to decrease morbidity and mortality is through screening the population as a whole.

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Address reprint requests to:
M. GOJNIC, M.D., Ph.D., Asst. Prof.
Medical Faculty of Belgrade
Institute of Gynecology and Obstetrics
38 Milesevska Street
11000 Belgrade (Serbia and Montenegro)