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ASYMPTOMATIC MIMICKING SPLENIC METASTASES IN A BREAST CANCER PATIENT – A CASE REPORT

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Summary

The spleen is very rarely involved by meatstatic disease in breast cancer patients. These metastases are rarely described in the literature. In this case report the authors report a case of a breast cancer patient having undergone the radical mastectomy for breast cancer one year ago, who was admitted to the hospital for regular follow-up evaluation of the disease with no symptoms. As the findings were suspicious for splenic metastases, explorative laparatomy and splenectomy were performed. The findings showed mimicking splenic metastases with the diagnosis of cavernous hemangioma of the spleen. We discuss the pathological and clinical features, the presentation, assessment and treatment of this case. The patient was in a good postoperative condition and referred for further oncological treatment.

KEY WORDS: *breast cancer, splenic metastases*

ASIMPTOMATIČNE PROMJENE KOJE OPONAŠAJU METASAZE SLEZENE U BOLESNIKA S RAKOM DOJKE – PRIKAZ SLUČAJA

Sažetak

U bolesnika s rakom dojke slezena je vrlo rijetko zahvaćena metastatskom bolešću. Te se metastaze u literaturi rijetko opisuju. U ovom prikazu slučaja autori iznose slučaj bolesnice s rakom dojke koja je godinu dana nakon radikalne mastektomije zbog raka dojke bez simptoma primljena u bolnicu radi redovitih pretraga u sklopu praćenja bolesti. Kako su nalazi upućivali na metastaze u slezeni, obavljena je eksplorativna laparotomija i splenektomija. Nalazi su pokazali promjene koje oponašaju metastaze slezene s dijagnozom kavernoznog hemangioma slezene. U radu se raspravlja o patološkim i kliničkim značajkama, predstavljanju, procjeni i liječenju te bolesnice. Stanje bolesnice nakon operacije bilo je dobro i upućena je na daljnje onkološko liječenje.

KLJUČNE RIJEČI: *rak dojke, metastaze slezene*

INTRODUCTION

Splenic metastases are extremely rare and difficult to diagnose in breast cancer patients. Since we found only a few cases reported in the literature, there is a need for further description and additional case report of suspicious findings of splenic metastases. Here we report a case of a breast cancer patient operated a year ago and given postoperative chemoradiotherapy, in whom ultrasound and CT scan revealed suspicious changes in her spleen declared as metastatic by our diagnostic team (1-3). Although the preoperative fine-needle aspiration of the spleen

showed negative results, explorative laparotomy and splenectomy were performed. Pathohistological and immunohistochemical findings showed the following diagnosis: Cavernous hemangioma of the spleen.

We could not find any reference to such a case in the literature, and with this case report we would like to point out the problem that may be encountered by diagnostic and surgical teams in oncology.

CASE REPORT

In October 2005, a 42-year-old breast cancer patient was admitted as inpatient to our hospital for regular follow-up evaluation of the disease with no symptoms. In August 2004, the patient underwent radical mastectomy of the left breast. The pathological and immunohistological findings after the surgery were as follows: Carcinoma lobullare invasivum. Metastases lymphonodorum axillae IV/14; pT=2.2 cm; estrogen receptors status - +++; progesterone receptors status - +++; expression of Her2 protein was negative. Postoperatively, the patient was treated with chemoradiotherapy; six cycles of chemotherapy by the FAC regimen (5-fluorouracil + doxorubicin + cyclophosfamid) + radiotherapy. After this treatment, the patient received continuous treatment with tamoxifen.

During the evaluation of the disease, the patient was completely asymptomatic and in good

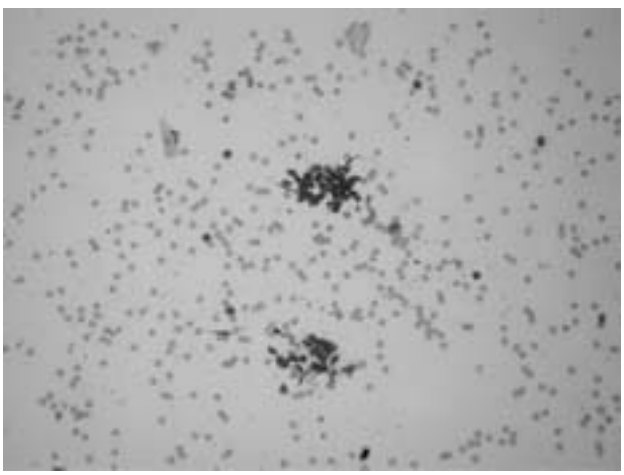

Figure 1. Fine-needle aspiration showing hypocellular smears with a few clusters of mixed endothelial and mesenchymal cells (MGGx200)

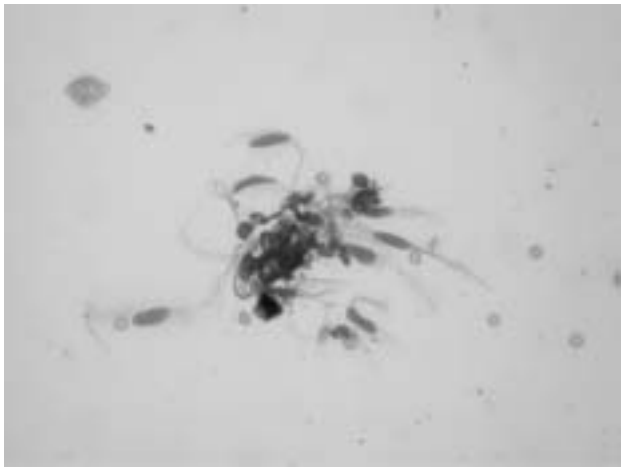

Figure 2. Fine-needle aspiration – a cluster of fibrocytes (MGGx400)

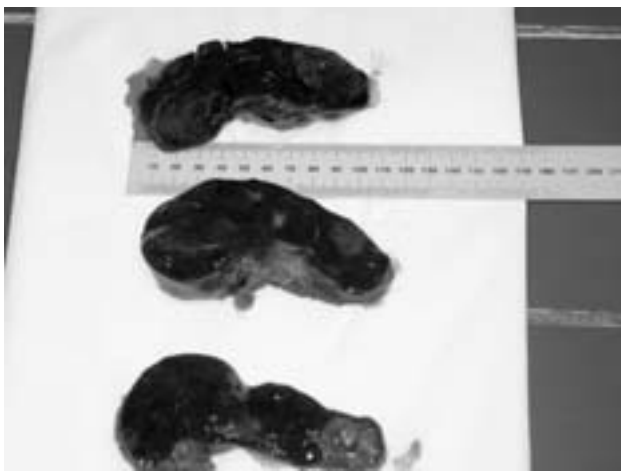

Figure 3. The spleen sent for pathohistological examination (three macroscopic tumors, the largest 4 cm in size)

general condition. Physical examination, laboratory findings, electrocardiogram (ECG) and chest x-ray were all normal. Tumor marker Ca 15-3 was 14 J/ml (normal values up to 28). Ultrasound of the operated area, right breast and both axillary regions, together with interpectoral regions were without any pathological findings. The skeletal scintigraphy finding was normal as well as the brain CT scan.

Since the sonography of the spleen showed suspicious changes, we did CT scan of the abdomen which confirmed suspicious metastatic changes at several places in the spleen. Percutaneous citology was performed and the results of fine-needle aspiration were negative. The

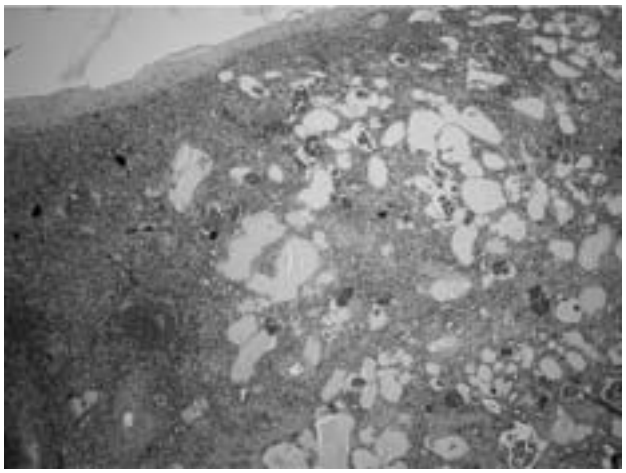

Figure 4. Hemangioma of the spleen; Hematoxylin-eosin (40X)

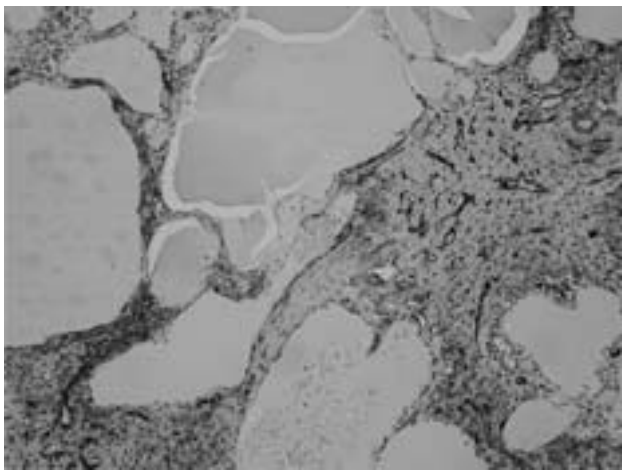

Figure 5. Positive immunohistochemical reaction with CD 34 (100X)

specimens obtained by fine-needle aspiration from the biggest spleen tumor, under ultrasound control and smears were stained with May-Grunwald-Giemsa (MGG). The aspirates were hypocellular in a relatively clean background. There were rare, weak cohesive clusters of endothelial cells, mixed with fibrocytes added by numerous lymphocytes (Figures 1 and 2). Occasional mitotic figures were noted. There were no malignant cells. Since PET scanning (positron emission tomography) cannot be done in Croatia, we performed the explorative laparotomy and splenectomy as indicated by our oncological team. The intraoperative examination showed no pathological findings except for the spleen which was 12x6 cm, completely changed by three tumors. The spleen was sent for pathohistological examination (Figure 3).

Pathological exploration showed the spleen which was 12x6x5 cm with three tumors of 4, 2 and 1 cm in size. The tumors were not confluented and they were cavernous and brown in color. No malignant cells were found. Immunohistochemically, the tumor tissue was cytokeratin negative, vimentin positive, S-100 negative, factor VIII and CD 34 positive. The final pathohistological diagnosis was: *Hemangiomata cavernosum lienis III* (Figures 4 and 5).

On the postoperative day 10, the patient was dismissed from the hospital in good physical condition, with recommendation of the oncological team for further therapy with anastrazol (Arimidex).

DISCUSSION

Metastatic carcinoma of the spleen is a very uncommon clinical problem (4) but not too unusual at autopsy if a through examination of the organ is carried out (5). Malignant melanoma, breast carcinoma, and lung carcinoma are the most common sites for the primary tumor, but many others have been described, including carcinoid tumor of the ileum (6). Breast carcinoma diffusely metastatic to the spleen may present as idiopathic thrombocytopenic purpura (7). Occasionally, metastases in the spleen result in a nodular configuration that simulates follicular lymphoma on low-power examination (8). The metastases can be superimposed on pre-existent diseases of the spleen, such as hairy cell leukemia or other diseases (9).

Few reports are available in the literature on isolated metastatic changes of the spleen as well as non-malignant changes mimicking breast cancer metastases (10-12). In cases like this, oncological diagnostic and surgical teams have no other choice but to indicate the splenectomy. In our case, the splenectomy was unnecessarily performed in a breast cancer patient with cavernous hemangioma of the spleen. Such patients require prompt and appropriate medical intervention to avoid possible metastatic spreading of the disease and proceed with the most appropriate further chemotherapeutical treatment. In such

cases, surgery is the treatment of choice and should be performed because it is not possible to identify preoperatively whether suspicious changes of the spleen are metastatic or just mimicking metastases.

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