Carcinoma of the Breast with Unusual Clinical Presentation : A Case Report

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Abstract

A common presentation of breast cancer is a palpable or non-palpable breast mass that might or might not demonstrate clinical signs of skin and/or nipple involvement. These malignant lesions frequently receive correct diagnosis only by physical examination under modestly experienced observers. We, hereby, reported the case of a 66-year-old woman who presented with a rapidly growing skin lesion at the left breast for three months. A 3.6x3x2.5 cm reddish, shiny, rubbery, sessile mass was seen on the upper outer quadrant of her left breast. The cytologic and histologic features of the tumor were typical for infiltrating ductal carcinoma. This case demonstrated a very unusual clinical presentation of breast cancer. No similar clinical feature of such cancer was mentioned in the reviewed literature.

Key word : Breast Cancer, Clinical, Polypoid, Sessile, Red, Infiltrating Ductal Carcinoma, Histology, Cytology

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Infiltrating ductal carcinoma of the breast invariably forms an intramammary solid tumor. The consistency and appearance of the cut surface usually appear either well circumscribed or stellar, or shows a combination of invasive and pushing margins[1]. Breast cancer with gross skin abnormalities are not uncommon. Those lesions, for example, include Paget's disease of the nipple, nipple retraction by

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peritumoral fibrosis, peau d'orange appearance in inflammatory carcinoma and advanced cancer with ulceration of the skin[2,3]. The present report describes a breast cancer patient with a strange skin lesion.

CASE REPORT

A 66-year-old very thin Thai female presented with a painful mass on the left breast that had rapidly enlarged over three months. During this period, her weight had decreased, 2 kg per month. She was married with no children. Past illnesses were mild and controlled hypertension and peptic ulcer.

On physical examination, the mass had a deep red color, sessile shape and approximately 3 cm at the greatest dimension. Its surface was shiny and smooth. The consistency was rubbery. It looked like a reddish immature-brain-shaped tumor arising from the areola edge of the upper outer quadrant of her left breast. (Fig. 1) The axillary lymph node was not palpable. She weighed 30 kg. Her blood pressure was 160/90 mm/Hg.

Fine needle aspiration was performed. The air-dried specimens were immediately stained with Diff Quick technique for cytoligic examination. The smears showed high cellularity consisting of several discohesive sheets of large size malignant epithelial cells within a bloody background. The tumor cells revealed anisonucleosis and crowded nuclei with high nuclear cytoplasmic ratio and prominent nucleoli. The cytoplasm was abundant with fine vacuolation. The cytologic findings were consistent with those of infiltrating ductal carcinoma, nuclear grade III. (Fig. 2) The fixed specimens, stained with Papanicolaou technique, demonstrated the same cytologic features.

The baseline laboratory investigations including; complete blood count, platelet count, renal function test, liver function test, blood glucose, urinalysis, chest film and liver ultrasonography; were checked and were within normal range.

The patient was diagnosed as T2N0MX stage of breast cancer. The operation, extended simple mastectomy with level 1 axillary lymph node dissection, was done, one week later.

The breast specimen measured 13x8.5x1 cm. The covering elliptical shaped skin measured 9x 3 cm. The skin was pale tan and revealed a 3.6x3x 2.5 cm deep red, shiny surface, rubbery, sessile mass at the skin of the upper outer quadrant. The mass was at the areola edge, located 1.5 cm away from the nipple. The cut surface of the tumor had a grayish white rubbery and glistening appearance. Histologi-

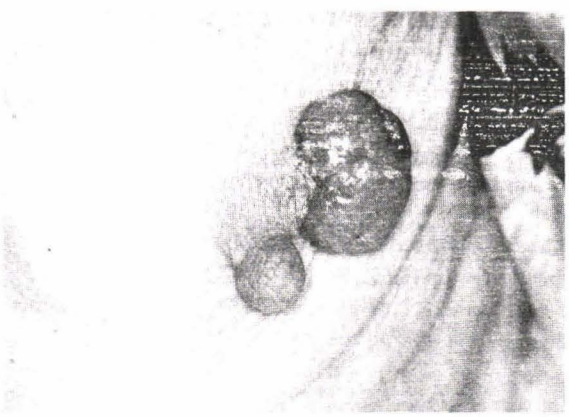

Fig. 1. Shows a board-base polypoid tumor mass arising from the areola edge of the upper outer quadrant of the left breast. The tumor shows a red and shiny surface.

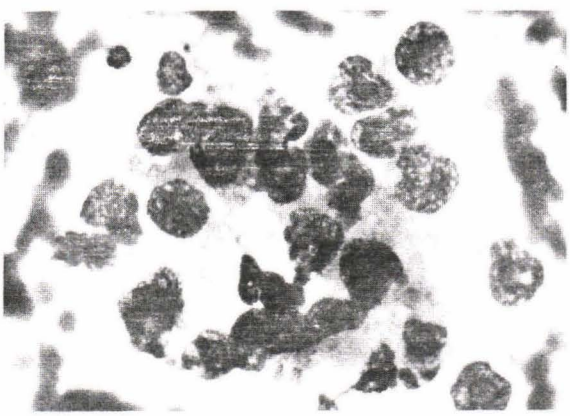

Fig. 2. A small glandular structure composed of large-size malignant epithelial cells. The tumor cells have high nuclear: cytoplasmic ratio, coarse hyperchromatic nuclei and prominent nucleoli. (Cytology specimen from fine needle aspiration, Diff Quik, 400X)

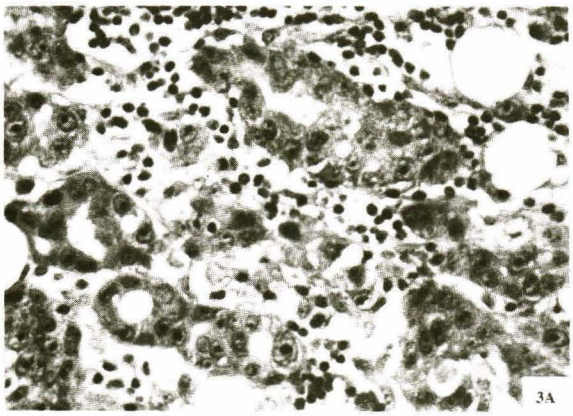

Fig. 3A. Histologic section of the tumor shows variable size and shape of tubules or glands lined with large size malignant cells with prominent nucleoli. Profound lymphocytic infiltration is noted. (H&E, X200)

Fig. 3B. Histologic section of the breast tissue reveals comedo-type intraductal carcinoma. The mammary duct is lined with high-grade malignant epithelial cells. A small amount of central necrotic material is noted. (H&E, X100)

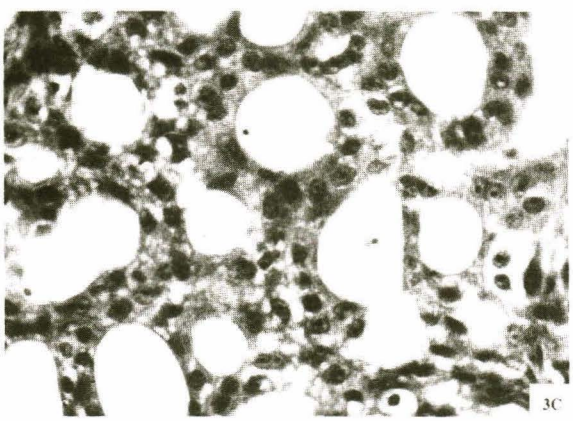

Fig. 3C. Histologic section of the breast tissue reveals cribriform-type intraductal carcinoma. The malignant cells are proliferated and bridged, forming multiple lumens. (H&E, X200)

cally, the sections showed nests, thick cords and solid sheets of large size malignant epithelial cells which occupied the entire mass and extended through the breast tissue. Tubular formation was observed. (Fig. 3A) The covering skin was intact. The tumor infiltrated all quadrants of the breast. Intraductal carcinoma component, comedo and cribriform types, were noted throughout the breast. (Fig. 3B and 3C) The histologic diagnosis was infiltrating ductal carcinoma, nuclear grade III, histologic grade II with component of intraductal carcinoma. No Paget's disease of the nipple was seen. All three resected axillary lymph nodes were free of metastasis. The immunohistochemical studies for estrogen (Dako®, Monoclonal Mouse, Clone 1D5, Code No. M7047) and progesterone (Dako®, Monoclonal Mouse, Clone PgR 636, Code No.019) receptors were negative, whereas, the tumor cells showed positive immunoreactivity for *c-erb B2* (Dako®, Rabit Anti-Human c-erbB2 oncoprotein, Code No. A0485), moderate degree, membrane staining.

DISCUSSION

Infiltrating ductal carcinoma is the most common histological type of breast cancer[1]. Patients with such a tumor usually present with a breast mass and/or abnormal mammographic findings. The tumor itself has the characteristic clinical and pathologic features that are generally not difficult to be diagnosed.

A reddish sessile mass is not an ordinary appearance of breast cancer. Lesions that may pre-

sent as a reddish or reddish-brown sessile mass are listed as the following[4-10].

1. Melanocytic tumors such as polypoid dermal melanocytic nevus and polypoid malignant melanoma.

2. Epidermal neoplasms such as polypoid variant of seborrheic keratosis, fibroepithelial polyp and nodular basal cell carcinoma with telangiectasia.

3. Various cutaneous appendage tumors such as eccrine poroma, dermal cylindroma, chondroid syringoma, syringocystadenoma papilliferum, apocrine hidrocystoma.

4. Neoplasms of soft tissue origin;

- Endothelial and vessel wall such as pedunculated hemangioma and pyogenic granuloma
- Neurothekeoma, myxoid variant
- Dermatofibroma
- Juvenile xanthogranuloma
- Pedunculated lipofibroma

5. Merkel cell tumor

6. Metastatic carcinoma; the common primary sites include breast, colon, lung and ovary.

Nevertheless, some of those lesions do not truly mimic the one of our case. The external surface of the tumor was intact, a deep red color and shiny contrast to the verrucoid appearance of epidermal lesions and contrast to the bright red and vascularized appearance of vascular lesions. Melanocytic tumors usually present with the dark color of melanin pigments. Its lobulated external surface is quite different from the frequently smooth surface of skin appendage tumors.

Despite the non-aggressive gross appearance, the tumor cells revealed; high nuclear grade, negative immunostaining for estrogen and progesterone receptors, positive immunostaining for *c-erb B-2* proto-oncogene; that suggested an unfavorable prognosis[1-3]. Because of the localized lesion and adequate tumor resection without evidence of metastasis, no adjuvant therapy was given.

This case report described an unusual presentation of infiltrating ductal carcinoma of the breast that was not mentioned in the reviewed literature. The lesions grossly resemble various benign and malignant tumors while being histologically different. We suggested that breast cancer should be included in the differential diagnosis of all breast lesions. Fine needle aspiration cytology is seems to be a rapid, easy and useful procedure to determine the diagnosis. Physicians and pathologists who deal with patients like this should keep this in mind when they examine the patients or the specimens.

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มะเร็งเต้านมที่มีลักษณะรอยโรคผิดธรรมดา: รายงานผู้ป่วยและทบทวนรายงาน

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ผู้ป่วยโรคมะเร็งเต้านมมักมาพบแพทย์หรือถูกตรวจพบด้วยอาการหรืออาการแสดงของการมีก้อนเนื้องอกภายในเต้านม โดยอาจจะมีหรือไม่มีรอยโรคที่ผิวหนัง โดยทั่วไปแพทย์ที่มีประสบการณ์พอสมควร จะสามารถให้การวินิจฉัยหรือสงสัยว่าผู้ป่วยเป็นโรคมะเร็งเต้านมได้จากประวัติและการตรวจร่างกาย ผู้นิพนธ์ได้รายงานผู้ป่วยโรคมะเร็งเต้านมจำนวน 1 ราย ซึ่งมีอาการและอาการแสดงแตกต่างจากผู้ป่วยโรคมะเร็งเต้านมทั่วไป โดยเป็นผู้ป่วยหญิงไทยอายุ 66 ปี มีก้อนโตเร็วที่ผิวหนังบริเวณเต้านมด้านซ้ายมา 3 เดือน ก้อนเนื้องอกมีลักษณะเป็นติ่งเนื้อสีแดง ผิวเป็นมันวาวขนาด 3.6x3x2.5 ซม. โผล่ขึ้นมาจากขอบหัวนมด้านนอกบน เนื้องอกมีลักษณะทางเซลล์วิทยา และฮีสโตโลยี เหมือนมะเร็งเต้านมชนิด Infiltrating ductal carcinoma ทั่วไป

คำสำคัญ : มะเร็งเต้านม, อาการ, ก้อน, ติ่ง, สีแดง, ฮีสโตโลยี, เซลล์วิทยา

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