Case 14

A 59-year-old Thai male from Petchaboon

Chief complaint: Progressive, asymptomatic skin lesion for 2 months

Present illness: About 10 months ago, the patient developed progressive leg swelling without any other symptoms, started from the right side, then the left side 4 months later. He was investigated as lymphatic obstruction, no detectable deep vein thrombosis from Doppler ultrasonography, lymphangioscintigraphy (28/2/51) revealed complete lymphatic obstruction of right leg. CT abdomen (12/3/51) revealed multiple retroperitoneal & bilateral inguinal lymphadenopathies. Thereafter he was referred to Ramathibodi hospital with suspicious of lymphoma.

2 months ago, multiple, asymptomatic skin lesions rapidly developed on his left anterior chest wall and abdomen. He also noticed painless lump at left axilla.

He had no fever, malaise, loss of appetite and weight loss. He never noticed breast mass nor mass at anywhere else. No symptom of chronic cough, bowel habit change, and difficulty in urination.

Past history:
• No underlying disease
• No previous radiation therapy

Personal history:
• Social drinking
• Smoking ½-1 pack/day for more than 20 years

Family history:
• His father had died from gastric cancer many years ago.
• No family history of breast cancer

Skin examination:
• Multiple, discrete & groups of erythematous & flesh-colored, granulation tissue-like papules & nodules on the background of diffuse, ill-defined border, indurated, erythematous plaque at left side of trunk, extending from chest to abdomen
• Ill-defined, firm, nodular, left subareolar mass, size ~ 2.5 cm.
• With overlying multiple skin-colored & erythematous, scale-crust nodular plaque at left areola

No nipple discharge

Physical examination:
• Vital signs: afebrile, BP 130/60, HR 84/min, RR 16/min
• GA: sthenic built, looked well, not pale, no jaundice, nonpitting edema of both legs
• CVS: normal S1S2, no murmur
• RS: normal breath sound
• Abdomen: not distended, liver & spleen-not palpable, no mass palpable, no shifting of dullness, no fluid thrill
• GU: normal size of both testes, no abnormal mass palpable
• PR: prostate gland size ~ 3+ fingerbreadths, smooth & rubbery, no rectal shelf
• Neurological system: within normal limit
• LN:
  • solitary left axillary LN, firm, movable, nontender, size ~ 4*4 cm
  • multiple, bilateral inguinal LN, various in size ~ 0.5-1.5 cm., firm, movable, nontender
• Extremities:
  • diffuse, nonpitting, edematous, erythematous plaques, extending from feet to both upper thighs

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**Investigations:**
- CBC: Hct 39.9%, Hb 13.3 g/dL, WBC 6,000 k/uL, N 51%, L 40%, M 7%, E 1%, B 1%, Platelet 260,000/uL
- LDH : 121 U/l (normal 140-310)
- BUN & creatinine : normal
- LFT : albumin 2.9 g/dL, others-normal
- Serum PSA : 0.7 ng/ml (normal)
- Urinalysis : normal

**Histopathology:**

S08-10002 A,B (from nipple and chest)
- Numerous cords of tumor cells, some with glandular differentiations, extensive infiltrate in superficial and deep dermis
- Tumor cell showing hyperchromatic, pleomorphic nuclei and abundant cytoplasm

S08-11643 A (from leg)
- Mild perivascular inflammatory infiltrate of mostly lymphocytes
- No evidence of cutaneous metastasis

**Immunohistochemistry**
- Human epidermal growth factor receptor-2 (HER-2): positive 2+
- Estrogen receptor (ER): negative
- Progesterone receptor (PR): negative
- Prostate specific antigen (PAS): negative
- Carcinogenic embryonic antigen (CEA): positive

**Diagnosis:** Male breast cancer with multiple cutaneous, lymph node and pulmonary metastasis

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Discussion:

Cutaneous metastasis is not uncommon condition, that should not be overlooked. Cutaneous metastasis may be the first evidence of internal malignancies, marker of recurrent diseases and even indicate staging and poor prognostic factor of malignant diseases. Cutaneous metastasis can occur concomitantly with other visceral metastasis.

From one large retrospective study in western country, malignant melanoma and breast cancer are the most common underlying malignancies of cutaneous metastasis in male and female respectively. And among breast cancer patients with any metastasis, 30% had cutaneous metastasis.

Cutaneous involvement from breast cancers have been reported as 8 distinct clinicopathological types, i.e. inflammatory metastatic carcinoma, En cuirasse metastatic carcinoma, telangiectatic metastatic carcinoma, nodular metastatic carcinoma, alopecia neoplastica, breast carcinoma of the inframammary crease, metastatic mammary carcinoma of the eyelid with histiocyteid histology, and, some authors have included the direct extension of breast cancers, Paget's disease.

As the other malignancies, cutaneous metastasis of breast cancer commonly presents as nonspecific, painless, solitary or multiple infiltrative papules, nodules and plaques, corresponding to histopathological findings, tumor cells infiltrate in dermis, subcutaneous fat, epidermis (so-called epidermotropism) with or without vascular involvement. The lesion may be flesh-colored, red, violaceous or brown-black in color, and often rubbery, firm to hard consistency, that can become necrotic or ulcerated. Cutaneous metastasis usually emerges rapidly without explanation, proliferates swiftly, and then remains stationary. Cutaneous metastasis can occur anywhere, but the most common sites are anterior chest wall and abdomen. Rarely, cutaneous metastasis can be unilateral, zosteriform, or reported as Wolf's isotopic response.

Cutaneous metastasis of male breast cancer (MBC) is uncommon, due to rarity of MBC. MBC accounts for less than 1% of all cancers in men and all breast cancers. Median age of onset about 68 years, 5-10 years older than that of female breast cancers. Approximately 90% of male breast cancers are invasive ductal carcinoma, in higher proportion than female breast cancers. MBC typically presents as a painless, firm mass that is usually subareolar, less often in the upper outer quadrant. Other findings at presentation include nipple retraction, ulceration of the nipple or skin, fixation to skin or underlying muscle, tumor tenderness, and palpable axillary nodes.

Only a few cases of cutaneous metastasis MBC have been reported. And the first case of remote cutaneous metastasis from MBC in the past 10 years in the dermatologic literature was recently reported, presented as erythema and edema of leg, skin biopsy revealed tumor cells in lymphatic channels. Our patient, presented as bilateral lymphedema and lymphatic obstruction of lower extremities as the first sign for several months before diagnosis of MBC and cutaneous metastasis could be made, may be the first few reported cases with uncommon presentation.

In the past, MBC was considered an aggressive disease with worse prognosis than in women, attributed to late diagnosis. More recent reports that were carefully matched for age at diagnosis, stage and grade do not substantiate a significantly worse survival in men. As in female breast cancer, tumor size and the presence as well as number of involved lymph nodes are the most important prognostic factors for MBC.

Reference