มะเร็งเต้านมในเพศชาย : รายงานผู้ป่วยทางพยาธิวิทยารายแรกของโรงพยาบาลศรีนครินทร์

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MALE BREAST CANCER : The first case of a Pathological Report in Srinagarind Hospital.

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หลักการและวัตถุประสงค์: มะเร็งเต้านมเป็นโรคที่พบไม่บ่อยในเพศชาย จากการสืบค้นผลการวินิจฉัยทางพยาธิวิทยาของโรงพยาบาลศรีนครินทร์ คณะแพทยศาสตร์ มหาวิทยาลัยขอนแก่น ย้อนหลังไปในปี พ.ศ. 2518 - 2552 พบว่ามีผู้ป่วยชายเพียงหนึ่งราย ที่ได้รับการวินิจฉัยทางพยาธิวิทยาว่าเป็นโรคมะเร็งเต้านมชนิด invasive ductal carcinoma grade II พร้อมกันนี้ได้มีการศึกษาทางด้าน สัณฐานวิทยา และ อิมมูนโนฮีสโตเคมี

วิธีการศึกษา: โดยการสืบค้นประวัติผู้ป่วยจากแฟ้มประวัติผู้ป่วย ศึกษาความผิดปกติของเซลล์ทางพยาธิวิทยาภายใต้กล้องจุลทรรศน์ และ การศึกษาทางอิมมูนโนฮีสโตเคมี

ผลการศึกษา: ผู้ป่วยมีอาการเบื้องต้นคือคลำได้ก้อนบริเวณด้านล่างฝั่งในของเต้านมขวาขนาด 2.5 ซม. ผลการวินิจฉัยทางพยาธิวิทยาเป็นโรคมะเร็งเต้านมชนิด invasive ductal carcinoma grade II และ การศึกษาทางอิมมูนโนฮีสโตเคมี พบว่าย้อมตัวรับฮอร์โมนอีสโตรเจน ในระดับ 3+

สรุป: มะเร็งเต้านมเป็นโรคที่พบได้น้อยมากในเพศชาย ลักษณะทางพยาธิวิทยาเป็นเช่นเดียวกับมะเร็งเต้านมในสตรี แต่พบว่าตัวรับฮอร์โมนอีสโตรเจนของเซลล์มะเร็งมีการแสดงออกสูงกว่า

คำสำคัญ: มะเร็งเต้านมในเพศชาย มะเร็งเต้านมชนิด invasive ductal ตัวรับฮอร์โมนอีสโตรเจน

Background and objective: Breast cancer is an uncommon disease in men. The review of the pathological reports in Srinagarind Hospital, KKU from 1978 to 2009 showed only one case that was diagnosed as male breast cancer. The clinical features, morphology and immunohistochemistry study of this case are presented here.

Methods: Reviewed the clinical history from OPD card and studied histopathology and immunohistochemistry by microscopy.

Results: The patient first symptom presented itself as a palpable breast mass (2.5 cm in diameter), located at the lower inner quadrant of right breast. The microscopic finding was invasive ductal carcinoma grade II. The immunohistochemistry study showed positive for estrogen receptor (3+).

Conclusion: Invasive ductal carcinoma is rare in males. Their histopathological pattern was remarkably similar to those seen in female breast cancer but showed a stronger expression of estrogen receptors than those detected in females.

Keywords: male breast cancer, invasive ductal carcinoma, estrogen receptor.

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Background

Breast cancer is a rare disease in men. It account for less than 1% of all breast cancers and less than 1% of all cancers in men in the United States[1,2] Their occurrence seems to be increasing every year.[3] The estimated incidence rate of breast cancer is 20.5 per 100,000 for women and 0.2 per 100,000 for men.[4] It is a small number relative to the 192,200 women who were diagnosed with breast cancer and the 643,000 men who got cancer in general. There are about 1,500 new cases of male breast cancer diagnosed and an estimated 400 deaths occur each year.[5,6]

The most clinical manifestation of male breast carcinomas is found in elderly individuals as a breast nodule with or without associated nipple abnormality.[7] The symptoms and prognosis of the disease are the same in both sexes. It is usually seen as a firm mass, it might be accompanied by a discharge or bleeding from the nipple. Pain and itching of the nipple may also be seen.[2] Gross and microscopic studies of male breast carcinomas are remarkably similar to those seen in females.[5] But the number of estrogen receptors contained in breast tumors (estrogen receptor positive tumors) in men is generally higher than in women.[2]

Here we report the first case of male breast cancer in the Pathology's Report of Srinagarind Hospital, Khon Kaen University, Khon Kaen, Thailand.

Case Report

In 2007, a 56 years old male patient had presented his history as a palpable breast mass at the lower part of medial side of the right breast for the past 2 years. A core needle biopsy was taken. The pathological diagnosis was invasive ductal carcinoma. Three weeks later, a right modified radical mastectomy was done. The macroscopic findings revealed a poorly circumscribed, firm, homogeneous, gray-white mass, 2.5 cm in size. The tumor was located at the lower inner quadrant. (figure 1.) The microscopic examination showed glandular/tubular pattern (about 50%) of pleomorphic ductal cells with polygonal shape, abundant eosinophilic cytoplasm, moderate pleomorphic nuclei and prominent nucleoli. The mitotic count was 8 mitotic figures /10 high power field. The stromal component showed highly cellular fibroblastic proliferation with focal necrosis. (figure 2.) The axillary's lymph node showed 3 in 9 nodes tumor metastasis. It was compatible with WHO grade II invasive ductal carcinoma. The immunohistochemistry showed positive reactions for estrogen receptor (ER 3+) (figure 3.) and progesterone receptor (PR 1+) (figure 4.) but negative for Ki-67 and Her-2 receptor. The patient was treated by chemotherapy for 6 cycles. After completing chemotherapy treatment, the patient had come back for a followed up visit every 3 months for 2 years. Additionally, the patient had received oral Tamoxifen for 5 years. For the past 3 years after treatment, the patient showed no evidence of tumor recurrence.

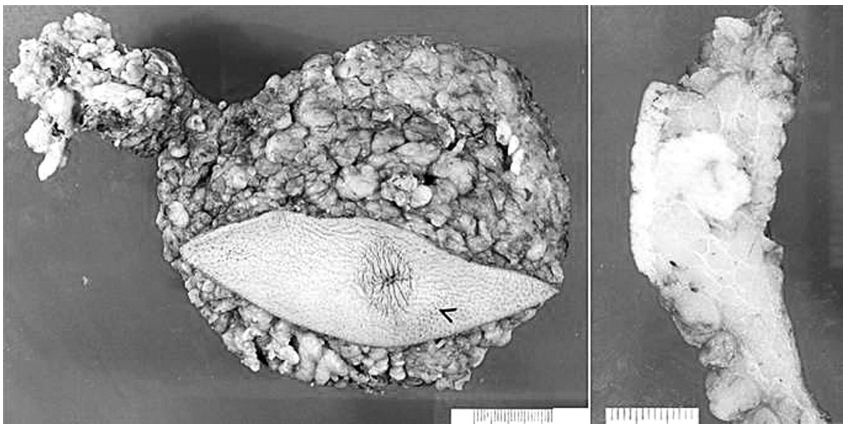

Figure 1 Right modified radical mastectomy of male breast carcinoma : a poorly circumscribed, firm, gray-white mass, 2.5 cm in size located at lower inner quadrant.

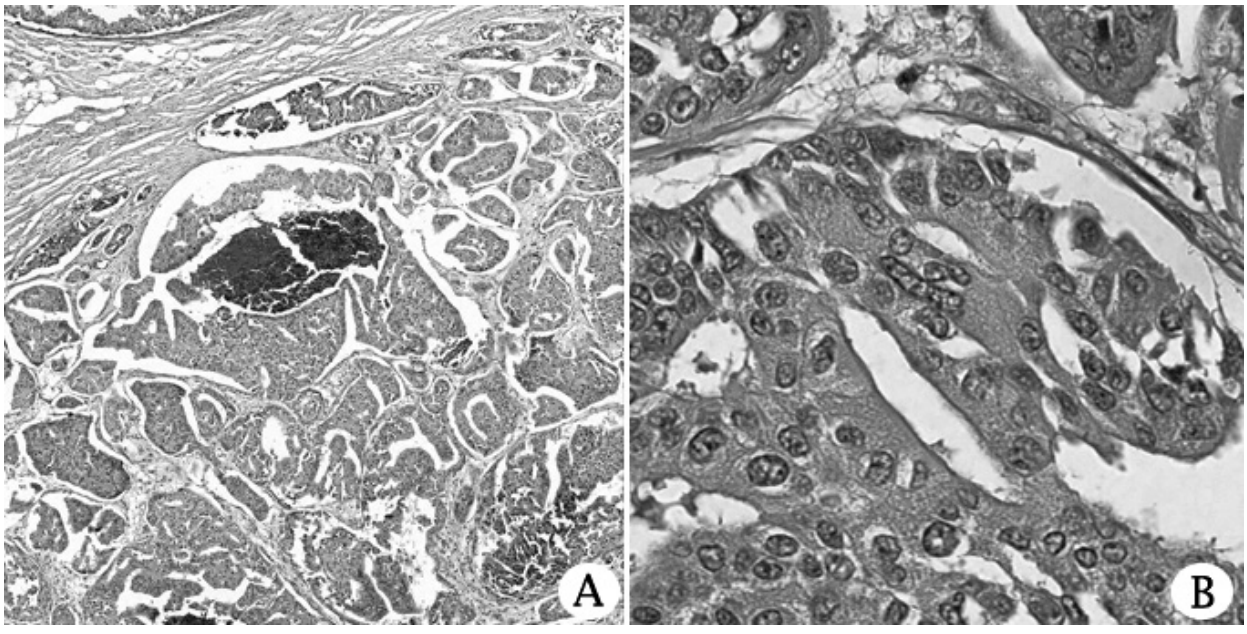

Figure 2 Microscopic finding : glandular/tubular pattern of pleomorphic ductal cells with polygonal shaped, abundant eosinophilic cytoplasm, moderate pleomorphic nuclei and prominent nucleoli. (A = 4X , B = 40X)

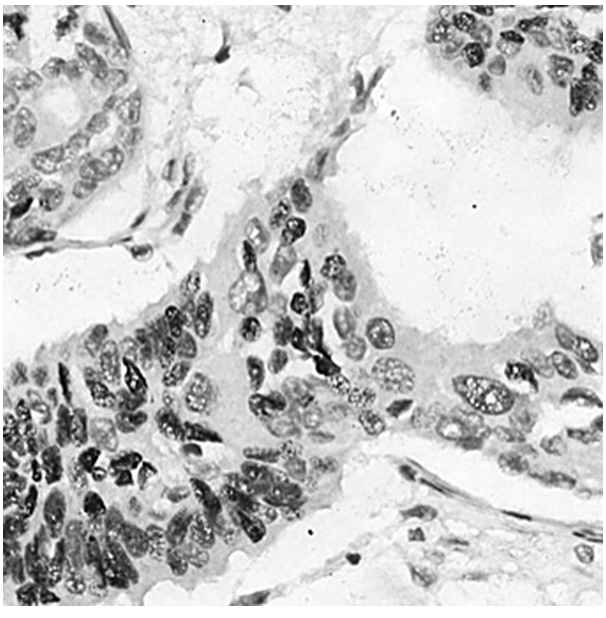

Figure 3 The immunohistochemistry staining shows the positive reaction for Estrogen receptor (3+)

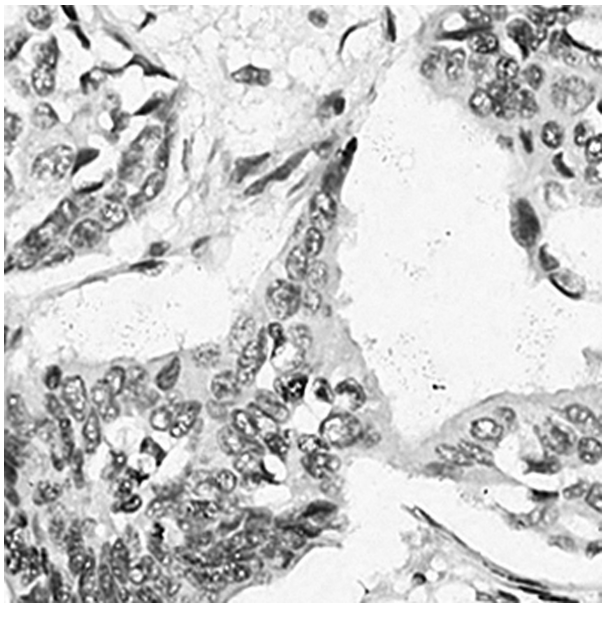

Figure 4 The immunohistochemistry staining shows the positive reaction for Progesterone receptor (1+)

Dicussion

Breast cancer is an uncommon and rare disease in men.[8,9] It is the second most common cancer in Thai women. The estimated incidence rate is 20.5 per 100,000 in women and 0.2 per 100,000 in men.[4] This report describes one case of male breast cancer by a pathological report in Srinagarind Hospital, KKU from 1986 to 2009. The first case of male breast cancer was reported by Wainwright in 1927. The incidence of breast cancer has increased in the past decade. The highest occurence of female breast cancer is in Bangkok and male breast cancer is in Songkhla.[4]

The histological feature of male breast cancers is fairly similar to that of females, the overwhelming majority being infiltrating ductal carcinomas.[2,10] The microscopic findings show the same pattern as reported by Tavaassoli and Devilee[9], revealing glandular and tubular pattern of pleomorphic ductal cells with polygonal shape. The abundant eosinophilic cytoplasm and moderate pleomorphic nuclei with prominent nucleoli were present. The stroma component showed highly cellular fibroblastic proliferation with focal areas of necrosis.[9,11,12] The axillary's lymph node showed metastatic 3 in 9 nodes examined. It was compatible with WHO grade II invasive ductal carcinoma.[7,9,11,12]

Immunohistochemistry study was performed by the immunoperoxidase technique on the paraffin embedded tumor tissue. It showed positive reaction, for estrogen receptor (3+), progesterone receptor (1+) but negative for Ki-67 and Her 2 receptor. This result is in agreement with Rayson, et al[3] of their study of immunohistochemistry staining of breast cancer cells from 77 male patients. They reported that the majority of tumor specimens were positive for ER (91%), PR (96%).[3] In 2002, Lertsanguansinchai and colleagues reported that 576 Thai female patients had been diagnosed with breast cancer. This report showed that 53.4 % of 399 patients had ER positive and 42.1 % of 380 patients had PR positive.[13] Our report showed the same results as Wertkin[14] and Kumar[5]. They reported that male breast cancers express ER and PR, although the percentage of ER positive in male breast cancers may be greater than in women in general. There is little data regarding HER-2 expression in male breast cancer.[3,9,11,13,14] Three years after completing chemotherapy treatments, the patient had follow up checks every 3 months and has had no evidence of tumor recurrence.

In conclusion, invasive ductal carcinoma is rare in males. The proper diagnosis of this disease is to use pathological examination, biopsies, furthermore it should be investigated with ultrasonography and mammography. Male breast cancer shows the histopathological pattern remarkably similar to those seen in female breast cancer but shows a stronger expression of estrogen receptors than in females. Modified radical mastectomy is the recommended treatment for invasive ductal carcinoma in males.

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