

Quiz

An erythematous plaque on the breast

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Report of a case

A 46-year-old woman presented with erythema and scaling of the nipple and areola of her right breast for the last one and a half years. It was associated with itching, mild burning and serous discharge. She applied various medicaments over the past years but there was only symptomatic relief.

Physical examination revealed an ill-defined, crusted, erythematous plaque involving the nipple and areola of right breast associated with mild retraction of the nipple. Breast examination did not reveal any palpable mass. Axillary lymph nodes were not enlarged. Her systemic examination and laboratory investigations were unremarkable. A biopsy was taken for histopathology (**Figure 1** and **2**).

What is your diagnosis?

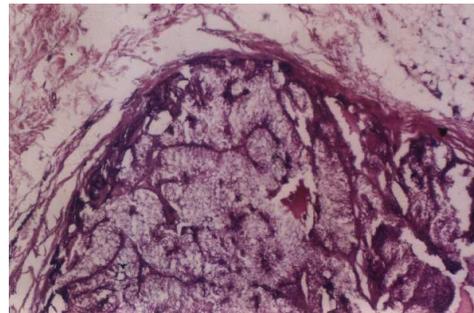


Figure 1 (Haematoxylin-eosin, original magnification x 40)

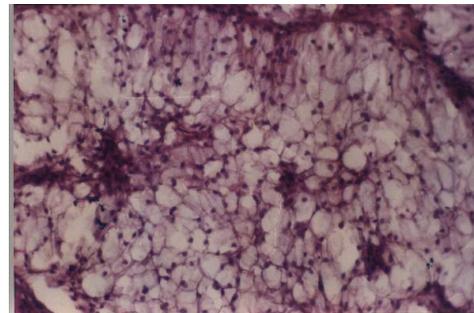


Figure 2 (Haematoxylin-eosin, original magnification x 400)

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Diagnosis

Paget's disease of breast

Microscopic findings and clinical course

Section of the biopsy specimen showed infiltration of the acanthotic epidermis with numerous Paget cells lying singly and in groups. These were large, rounded cells that contained a large nucleus and ample cytoplasm. The cytoplasm of these cells stained much lighter than that of adjacent squamous cells which were compressed between them. There was no invasion of the dermis by Paget cells. Chronic inflammatory cells were present in the upper dermis.

Discussion

Paget's disease of breast occurs almost exclusively in women, but a few instances of its occurrence in male breast have been described.¹ It is a rare disorder of nipple-areola complex that is often associated with an underlying *in situ* or invasive carcinoma.² It is characterized by progressive, eczematoid changes with persistent soreness or itching. Due to its seemingly benign appearance, diagnosis is often delayed. There are two main theories regarding the histogenesis of the disease: the epidermotropic and the *in situ* transformation. The first suggests that

Paget cells are ductal cells that have migrated from an underlying carcinoma of breast parenchyma to the epidermis of the nipple. The second postulates that nipple keratinocytes undergo transformation into malignant cells independent from any pathology within the breast parenchyma.³

In 50% of the cases, a palpable mass is evident and it usually represents an infiltrating carcinoma with involved axillary lymph nodes. In the absence of a mass, the prognosis is invariably better as it reflects a non-invasive tumor. The standard treatment is mastectomy.

Although in our patient, no palpable mass or lymphadenopathy was present, yet a biopsy was imperative. For long-standing unilateral breast eczema which is not responsive to medicaments a skin biopsy to confirm or rule out Paget's disease.

References

1. Satiani B, Powell RW, Mathews WH. Paget's disease of male breast. *Arch Surg* 1977; **112**: 587-92.
2. Sakorafas GH, Blanchard DK, Sarr MG. Paget's disease of the breast: a clinical perspective. *Langenbecks Arch Sur* 2001; **386**: 444-50.
3. Lev-Schelouch D, Sperba F, Gat A. Paget's disease of the breast. *Harefuah* 2003; **142**: 433-7.