## Mammary Paget's Disease with Intraductal Spread: a Patient Report

## Kunio Araki, Kohei Shomori, Hiroshige Nakamura\*, Hironobu Adachi and Hisao Ito

Division of Organ Pathology, Department of Microbiology and Pathology, School of Medicine, Tottori University Faculty of Medicine, Yonago 683-8503 and \*Clinic of Thoracic surgery, Yonago National Hospital, Yonago 683-8518 Japan

A 49-year-old woman was diagnosed with mammary Paget's disease and underwent a modified mastectomy. Paget's cells were observed not only in the nipple epidermis and adjacent lactiferous ducts, but also at several branches of the lactiferous ducts in the deeper breast. In treating mammary Paget's disease, the possibility of intraductal spreads should be kept in mind.

**Key words:** breast conservative therapy; intraductal spread; mammary Paget's disease; modified mastectomy

Mammary Paget's disease is usually localized in the nipple epidermis and lactiferous duct near the nipple (Lloyd et al., 2000). Breast conservative therapy has been attempted for such a patient (Pierce et al., 1997). However, this method may not be appropriate for all patients with Paget's disease, because extensive intraductal spreads of Paget's cells have been occasionally found. Here, we report a case of a patient with mammary Paget's disease involved in intraductal spreads to the deeper portions of the breast.

## **Patient Report**

A 49-year-old women was admitted with an eczematous change lasting 5 years, followed by disruption and serous secretion of the right nipple. A cytological examination of the secretion showed a few Paget's cells characterized by abundant clear cytoplasms and large nucleoli (Fig. 1). No palpable masses or nodules were recognized in the right breast and axillally region. Ultrasonography, mam-



**Fig. 1.** A cytological examination of the patient's nipple secretion shows a few Paget's cells characterized by abundant clear cytoplasms occasionally containing large nucleoli (arrow) (Papanicolaou stain; original magnification  $\times$  400). Bar = 50  $\mu$ m.

Abbreviations: EVG, elastic van Gieson; MRI, magnetic resonance imaging; PAS, periodic acid-Schiff

K. Araki et al.



Fig. 2. Paget's cells characterized by abundant clear cytoplasms and large nucleoli are observed in the nipple epidermis (hematoxylin and eosin stain; original magnification  $\times$  100). Bar = 100 µm.



mography and magnetic resonance imaging (MRI) showed no abnormal findings of any underlying mass or micro-calcification in the breast. She was diagnosed with mammary Paget's disease, which was clinically corresponded to Tis N0 M0, stage 0 according to the tumor-node-metastasis classification of The Japanese Breast Cancer Society (2000). After giving informed consent, she underwent a modified mastectomy with a level-II axillary dissection, because preoperative imaging results including ultrasonography, mammography and MRI were inconclusive in detecting any underlying tumor or intraductal spread of Paget's cells (Dixon et al., 1991; Kothari et al., 2002).

Macroscopically, the removed right breast showed no solid tumor, calcification, necrosis or hemorrhage. The specimen was sliced at 5 mm-interval serial sections, fixed in 10% buf-

**Fig. 3.** Paget's cells spread into the superficial lactiferous ducts (arrow) near the nipple (hematoxylin and eosin stain; original magnification  $\times$  40). Bar = 100 µm.