

Ductal Adenoma of the Breast : A Case Report¹

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Ductal adenoma of the breast is an uncommon benign tumor consisting of an adenomatous nodule within the ductal lumen; on both clinical and histologic examination, it may simulate malignancy. We report a case of ductal adenoma of the breast, and the related mammographic and sonographic findings.

Index Words : Breast neoplasms, radiography
Breast neoplasms, US

Ductal adenoma of the breast is an uncommon benign lesion that on both clinical and histological examination, may simulate malignancy(1). To our knowledge, only one report of the radiological appearance of ductal adenoma of the breast has appeared in the literature(2). We report a case of ductal adenoma, together with the related mammographic and sonographic findings.

Case Report

A 69-year-old woman presented with a palpable mass in the left breast, first noted one month earlier. There was no history of breast pain or nipple discharge. Physical examination revealed a 3×3 cm sized firm, movable and nontender mass without nipple retraction or skin change in the subareolar area. There was no associated axillary lymphadenopathy and the right breast was normal.

A mediolateral oblique mammogram showed a 2×2.5 cm sized nodule with central calcification(Fig. 1A). Dense calcification in the nodule was thought to be benign, but adjacent irregular shaped microcalcification suggested malignancy. The nodule revealed a partly

ill-defined margin, with some spiculation, and on spot compression view, multi-lobulation and spiculation were more distinctively demonstrated(Fig. 1B). Sonography showed a 1.8×1.5 cm sized, well-defined, round and hypoechoic nodule with calcification(Fig. 1C). Bilateral shadowing was observed and there was no subcutaneous fat obliteration. Sonographic findings suggested benignancy, but on the basis of mammographic findings, excisional biopsy was performed. This showed that the nodule was fairly well circumscribed and 1.8 cm in maximal diameter, about the same size as measured by sonography. Grossly, it was lobulated and focally granular, with central calcification. Microscopically, the nodule consisted of proliferative glandular epithelium enclosed in a dense fibrous ductal wall(Fig. 2A, B). Papillary structures were absent and calcification was noted within the glandular lumen as well as in the connective tissue stroma. Mitoses were absent and the rest of the breast was unremarkable. The pathologic diagnosis was ductal adenoma of the breast.

Discussion

Since ductal adenoma of the breast was first reported in 1984 by Azzopardi and Salm, it has been mentioned in a few pathologic reports(1, 3, 4). Many ductal adenomas consist of an adenomatous nodule clearly contained within the ductal lumen, but others, however, are more complex; in these, the tumor is not obviously confined to the ductal lumen, but giving the impression of having outgrown its confines(1). It

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occurs in older patients and is more commonly found in medium and small, rather than major subareolar ducts. Because of its location, it presents as a palpable lump, and unlike the intraductal papilloma, is not associated with nipple discharge.

The microscopic features of typical ductal adenoma are a non-papillary mass composed of tubules lined with epithelial and myoepithelial cells, separated by a

moderate amount of connective tissue with a few mitoses. The detailed microscopical features resemble those seen in ductal papilloma, the most important difference being that the lesion is solid and is totally devoid of the arborescent and fronded structure of a papilloma(1). Degenerative change(central or eccentric fibrosis with dystrophic calcification or old hemorrhage or both) further modifies the appearance of the neo-

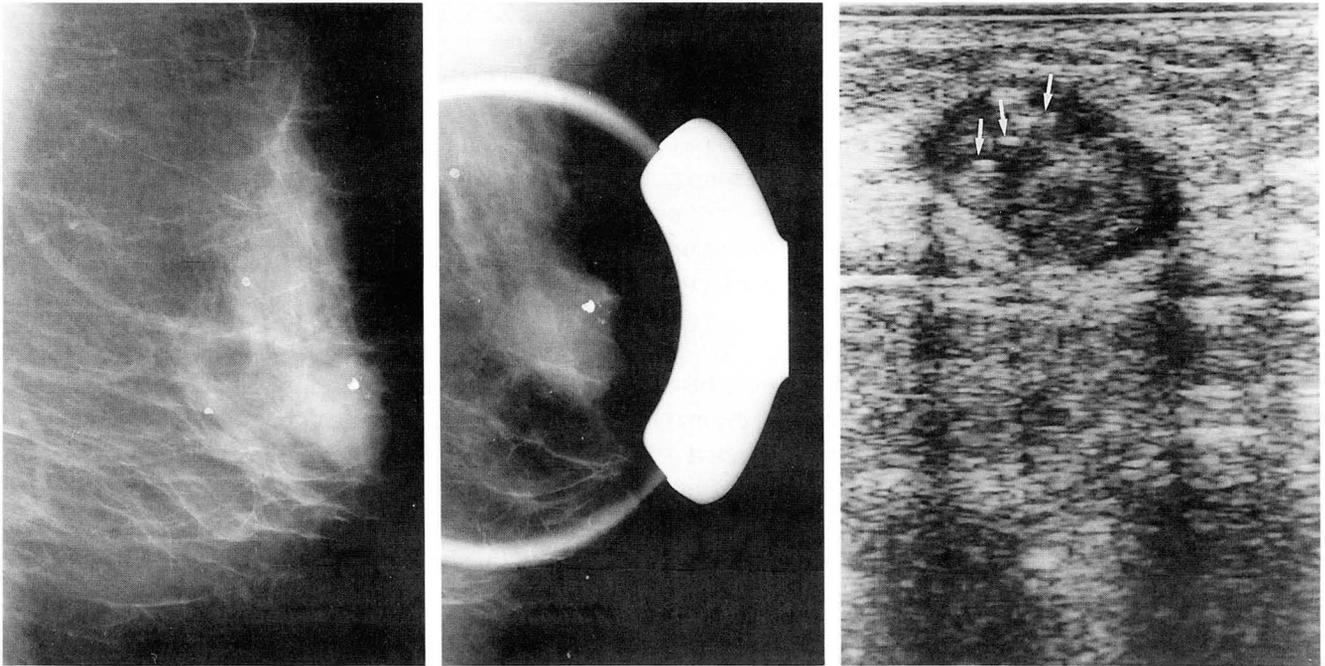


Fig. 1. Left mediolateral oblique view (A) and left mediolateral spot compression view (B) show a 2×2.5 cm mass with some marginal spiculation. Dense calcification and microcalcifications adjacent to it are noted. Sonogram of the left breast (C) shows an 1.8×1.5 cm sized, well-defined and heterogeneou

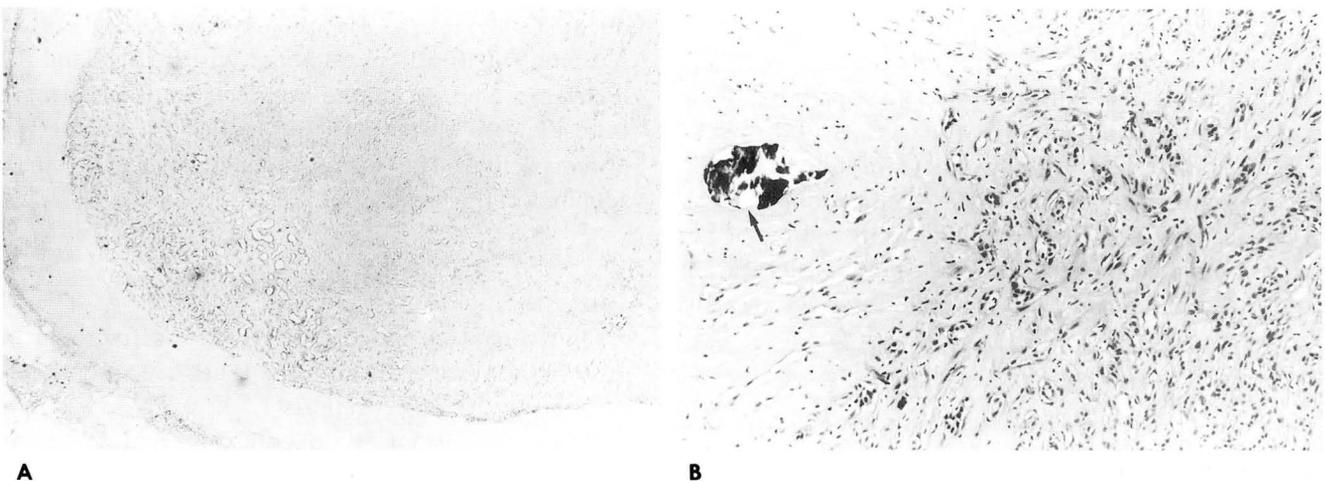


Fig. 2. A. Photomicrograph shows a proliferated glandular epithelium surrounded by a densely fibrous ductal wall(H & E staining, ×30).

B. Photomicrograph shows a compact cellular nodule consisted of cluster glandular units with ordered association of epithelial and myoepithelial cells. Calcification (arrow) is noted within H & E staining, ×100).

plasm(3). A fibrotic reaction also occurs with apparent invasion of surrounding tissue; on frozen section, this has occasionally been mistaken for malignancy(1). Our case also showed focal invasion of surrounding tissue, a feature can be confused with malignancy, but to determine whether the lesion is benign, identification of the two cell type structures (epithelial and myoepithelial) is crucial(4). The cytologic features of ductal adenoma have recently been reported(5, 6); smears were highly cellular with epithelial cells in sheets, and naked oval nuclei in the background, indicating benignancy, were observed.

According to Azzopardi(1), calcification was supposedly a common feature, but its mammographic appearance was not described. Moskovic and Ramachandra(2) reported one case of ductal adenoma of the breast which showed malignant looking calcification but no associated soft tissue mass. Our case presented as a palpable mass, seen on mammography as a discrete mass with calcification, the dense and irregularly shaped appearance of which suggested benignancy and malignancy, respectively. We could find no reference to its sonographic appearance, but in this case, a well defined mass with bilateral shadowing and posterior enhancement was suggestive of sonographic feature of benign mass, though this was nonspecific. Due to its mammographic appearance, and the fact that the patient was 69, tissue confirmation was therefore necessary; radiological differential diagnosis aims to distinguish carcinoma, especially in older patients, and fibrocystic disease including sclerosing adenosis(2).

The need for histologic confirmation before definite surgery has been emphasized by the report in which a pre-planned mastectomy on the basis of clinical findings suggesting malignancy was canceled because excisional biopsy proved it to be benign(7). Malignancy was found in two of 24 patients(1); one revealed a focus of lobular neoplasia, the other showed a small focus of ductal carcinoma in situ, topographically unrelated to the ductal adenoma. There was no case of recurrence after surgery for ductal adenoma.

Clinically ductal adenoma mimics carcinoma. As the cases reviewed demonstrate, however, it is difficult to differentiate benignancy from malignancy on the basis of imaging findings.

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유방의 유관 선종: 1예 보고¹

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유방의 유관 선종은 늘어난 유관내에 있는 선종성 종괴로 구성된 매우 드문 양성 종양이다. 이는 주로 나이가 많은 환자에서 생기며 임상적으로나 조직학적으로 악성으로 오인되는 경우가 있다. 저자들은 단단하게 만져지는 유방 종괴를 주소로 내원한 69세 여자에서 생긴 유관 선종의 유방촬영술과 초음파 소견을 보고한다.

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