precancerous lesions.

An Atlas of Subgross Pathology of the Human Breast With Special Reference to Possible Precancerous Lesions

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Summary

One hundred ninety-six whole human breasts were examined by a subgross sampling technique with histologic confirmation. The method permitted the enumeration and identification of essentially all the focal dysplastic, metaplastic, hyperplastic, anaplastic, and neoplastic lesions. Of the 196, 119 were suitable for complete quantitative morphologic analysis of the focal lesions by type. They consisted of 67 breasts obtained by autopsy, 29 cancerous breasts obtained by mastectomy, and 23 contralateral to those with cancer. All lesions, photographed subgrossly, were subsequently confirmed and correlated histologically. Morphologic evidence supported the hypothesis that most lesions traditionally grouped as mammary dysplasia or fibrocystic disease, including apocrine cysts, sclerosing adenosis, fibroadenomas, various forms of lobules (sclerotic, dilated, hypersecretory, hyperplastic, atypical, or anaplastic), ductal carcinoma in situ (DCIS), and lobular carcinoma in situ (LCIS), arose in terminal ductal-lobular units (TDLU) or in the lobules themselves. A probable exception was papilloma of ducts larger than terminal ones. Isolated foci of DCIS within the TDLU were seen in 40% of cancerous breasts, which indicated that the disease often was multifocal. Of the contralateral breasts, the 60% with clinical cancer contained such lesions, and data were in accord with the clinically known fact that women with previous breast cancer have a high rate of the disease in the remaining one. An atypical lobule (AL) of type A (ALA) had the following characteristics: *a*) It was more common in cancerous breasts or in those contralateral to cancer than in breasts not so identified; *b*) it had lobular morphology and was a terminal structure on the mammary tree; *c*) it tended to persist after the menopause, whereas normal lobules usually atrophied; *d*) it showed variable degrees of anaplasia forming an arbitrary continuum from normal lobules to ductal carcinoma in situ; and *e*) as ALA progressed to DCIS, the unfolded lobule resembled a duct which gave the false impression that DCIS was a ductal lesion. The morphologic evidence supported the hypothesis that the lesions herein called AL were derived from TDLU and were precancerous. AL may give rise by diverging histogenetic pathways [ALA and AL type B (ALB)] to both DCIS and LCIS, respectively. Cancerous breasts and those contralateral to cancer

contained many more lesions of all types than did noncancerous breasts. Analysis of the 28 pairs of breasts obtained from autopsies revealed that the two members of each pair had similar kinds of lesions, but the degree of cytologic atypia varied. Lobules were best developed in the central and lateral parts of the breast. Normal-appearing lobules, hyperplasias in terminal ducts (usually associated with ALA and variable epithelial anaplasia), and apocrine cysts frequently persisted for decades after menopause. Apocrine metaplastic cysts rarely occurred before the fourth decade of life, but were more abundant in breasts of high-risk cancer patients. Focal epithelial hyperplasia in ducts larger than terminal ones was rare. Papillomas in ducts larger than terminal ones rarely showed severe anaplasia. Hypersecretory lobules were found in nulliparous females even in the eighth decade and appeared to be more common in breasts from patients treated with digitalis, dilantin, and reserpine.

Topic:

- reserpine
- digitalis glycosides
- phenytoin
- menopause
- cancer
- cytology
- ductal carcinoma in situ
- epithelium
- anaplasia
- autopsy
- cysts
- fibroadenoma
- breast fibrocystic disease
- focal epithelial hyperplasia

hyperplasia

papilloma

trees (plant)

breast

genus: digitalis

mastectomy

pathology

lobular carcinoma in situ

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