

synergistic sympatholytic actions of the two drugs were potentiated by the sympathectomy, but α -methyldopa could also have played a role through its central action.

The interaction between phenoxybenzamine and α -methyldopa might be therapeutically useful in patients with acquired or congenital neurologically induced bladder outlet obstruction and in patients with urinary obstruction following operations on the lower genitourinary tract.

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Breast cysts: an office-curable disorder

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Some doctors and most patients describe all nonmalignant breast lumps as cysts. In fact, only a minority of such lesions are true cysts (i.e., sacs containing liquid). Diagnostic accuracy is important for more than academic reasons because, to the immense relief of the patient, a breast cyst can be made to disappear in the office by aspiration. The anxiety, inconvenience and morbidity of unnecessary breast biopsy or other investigations are thus avoided, as is the strain on our increasingly restricted health care resources. The purpose of this paper is to re-emphasize the features of gross breast cysts to facilitate their diagnosis and cure by aspiration.

Cysts have various causes.¹ Most are of the "blue-domed" variety,² a manifestation of the mammary dysplasia that results from the monthly cycles of growth and involution.

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The contents of these are watery and may be yellow-brown or green. Other cysts are manifestations of comedo mastitis or duct ectasia.³ These are seldom larger than 1 cm in diameter and the contents are usually thick and brown.

Methods

The cysts considered in this study were all of those diagnosed among 2585 consecutive consultations for any breast disorder between 1969 and 1979 inclusive.

The diagnosis was made mostly by aspiration. With socially clean hands the skin overlying the lump was swabbed with alcohol. The suspected cyst was steadied while a no. 20 needle with a 10-ml syringe was quickly inserted into the cyst without the use of local anesthesia. While the cyst was gently squeezed with the steadying hand the needle was slowly withdrawn as the contents were aspirated. The contents were usually discarded.

In 16 patients the cysts were diagnosed by surgical biopsy performed because of the clinical suspicion of either fibroadenoma or carcinoma.

Results

A total of 331 patients had

breast cysts; 2 had had earlier contralateral breast cancer. Among the same series of consultations were 362 patients with breast cancer.

The age distribution of patients with breast cysts is quite different from that of patients with breast cancer (Table I). The patients with breast cysts ranged in age from 25 to 78 years, but seven eighths of the cysts occurred in the two decades between 35 and 54, with over one third in the age group 45 to 49 years. It was in the latter age group, 45 to 49, that breast cancer became common. Nearly 80% (263) of the women were having menstrual cycles at the time of diagnosis or were 50 years of age or less and had had an ovary-preserving hysterectomy.

In 108 (33%) of the patients a cyst aspiration or a biopsy of a benign breast lesion had previously been done; the exact earlier diagnosis was rarely available. In 112 (34%) of the patients one of the two procedures was done subsequently, and in 46 (14%) of the patients these procedures were done both before and after the study consultation. Thus, more than half of the women had repeated breast disorders requiring either aspiration or biopsy, and several had multiple recurring cysts over many

years. A substantial proportion of patients had continued breast lumpiness or soreness.

At the time of the study consultation 28 (8%) of the patients had bilateral breast cysts and 29 (9%) had multiple cysts in one breast.

The cysts varied in size from a few drops to 64 ml. The sizes of the 666 cysts for which the volume of the contents was recorded are given in Table II.

In 14 (4%) of the patients the cyst recurred within 1 month and was reaspirated. In four of these patients a biopsy was done after a second recurrence but no cancer was found. In seven others there was some residual mass after aspiration.

Three other patients (aged 35, 56 and 62 years) had lesions that could be aspirated, thus appearing to be cysts, but ultimately proved to be carcinomas 2, 0.5 and 1 cm in diameter. The material aspirated from each lesion contained some blood, and each lesion recurred within 1 month.

Discussion

Breast cysts are not a single en-

tity since the contents vary so much in both colour and consistency. Most, however, are probably a manifestation of mammary dysplasia. It is clear that in half of the women afflicted the cyst is part of a diffuse, chronic disorder that continues for many years, features thickened areas and the recurrent development of cysts, and may be associated with breast soreness and discomfort. The disorder afflicts chiefly women between 35 and 54 years of age, stopping with the menopause, but cysts do occur in both younger and older women.

Breast cysts can be suspected clinically when a woman of the appropriate age who is menstruating has an isolated lump that is round, relatively mobile, has a fairly precise margin and has no suggestion of tethering. Cysts are firm; they rarely fluctuate. The diagnosis is confirmed and the cyst is usually cured by aspiration, obviating the need for surgical biopsy or other intervention. Because cystic lesions do occur in women outside of the usual age range, it is always worth aspirating any isolated lump before doing a biopsy.

The three patients with cancers containing fluid that could be aspirated and appeared at first to be cysts promptly recurred after aspiration, and the aspirate was blood-tinged. Two of the patients were older than the usual patients with breast cysts. Biopsy should be considered for any cyst that recurs promptly more than once, especially if the aspirate is bloody, if there is a residual mass or if the patient's age is not in the usual range. In no patient was the diagnosis delayed as long as 3 months.

The fear of missing cancer by aspirating and discarding the aspirate is not justified.⁴ First, cystic carcinomas are rare; the frequency of less than 0.5% in this series of cysts corresponds to that in most other reports.⁴⁻⁶ Second, many authors have not found cytologic examination of the fluid helpful,^{4,7,8} and those that have advocated it have not provided supporting data.⁴⁻⁶ In the only patient in this series with a cystic carcinoma whose fluid was examined cytologically, the report was negative.

The number of patients with gross breast cysts was approximately equal to the number with breast cancer in this study. Thus, Canadian women probably have a 7% to 8% lifetime risk of having a gross breast cyst.

Although Haagensen¹ felt that gross breast cysts were associated with an increased risk of the ultimate development of breast cancer, this view is not shared by others. The incidence of breast cancer in this group of women will be reported later. It is noteworthy that two of the women had had breast cancer before their first cyst developed.

Although half of the patients who have breast cysts will require further aspirations or possibly biopsies, and many more will have further episodes of lumpiness or soreness, there does not appear to be any justification for automatic follow-up. Each episode can be dealt with when it is recognized by the patient.

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Table I—Age distribution of patients with breast cysts or breast cancers

Age group (yr)	Breast lesion; no. of patients	
	Cyst	Cancer
< 29	5	4
30-34	12	10
35-39	42	14
40-44	81	17
45-49	114	48
50-54	50	56
55-59	15	43
60-64	4	34
65-69	4	47
70-74	2	36
75-79	2	23
≥ 80	0	30
Total	331	362

Table II—Sizes of 666 cysts

Volume of contents	No. of cysts
Drops to 1 ml	112
> 1 to 5 ml	317
> 5 to 10 ml	136
> 10 ml	101