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# Communications

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## Cyclic Breast Pain

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Cyclic breast pain is reported to be a common symptom.<sup>1</sup> In studies from breast clinics 18 to 40 percent<sup>2,3</sup> of women presenting with breast pain have cyclic pain. Because no studies of cyclic breast pain in the family practice office setting could be located, an office-based study of cyclic breast pain was undertaken to determine prevalence and morbidity. The relationship between cyclic breast pain and caffeine intake, smoking, oral contraceptive use, diuretic use, age, height, weight, bra size, parity, and history of breast feeding was also analyzed.

### Methods

Women aged between 20 and 50 years, presenting to offices of physicians participating in the Family Practice Research Group of the University of Illinois College of Medicine at Peoria, were asked to complete a questionnaire. The practices were considered representative of private practice within the community. None of the women were consulting their physician for breast pain when surveyed.

Caffeine intake was estimated by asking the amount of caffeine-containing beverages consumed per day and calculating their caffeine content using a standard table.<sup>4</sup> Women who were not menstruating for any reason including hysterectomy, pregnancy, and early menopause were excluded from analysis. The data were analyzed using the chi-square test and two-tailed paired Student's *t* test using standard formulas. A  $P < .01$  was used to test for statistical significance.

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### Results

Of 693 questionnaires returned, 443 were available for complete analysis. One hundred ninety-nine questionnaires were excluded because the women were not menstruating. Fifty-one questionnaires were excluded because they were not answered completely.

Cyclic breast pain occurred in 47.4 percent of the menstruating women. Of the women with cyclic pain, 91.1 percent had pain before their period. The pain lasted an average of 4.01 days, with a range from 1 to 15 days. Women who complained of moderate or severe pain reported significantly longer ( $P < .001$ ) duration of pain (5.35 vs 3.15 days). There was no significant difference in the duration of the period when menstruating women with and without cyclic pain were compared (4.98 days vs 5.17 days). The pain occurred in both breasts equally in 70.0 percent of the women with cyclic pain. The pain was mild in 58.4 percent, moderate in 38.2 percent, and severe in 2.5 percent. Some women had pain with every cycle, while others did not, and the pain varied in intensity from one cycle to another.

### *Relationship of Variables to Cyclic Pain*

The women with cyclic pain were older ( $P < .01$ ) than the women without cyclic pain (32.9 vs 30.8 years). Height, weight, bra size, parity, history of breast feeding, smoking history, and caffeine intake were no different between women without cyclic pain and women with cyclic pain. Diuretic use (16.4 vs 15.4 percent) and oral contraceptive use (23.5 vs 26.0 percent) were not significantly different in the cyclic breast pain group when compared with the group with no cyclic pain.

### *Morbidity of Cyclic Pain*

Medical advice had been sought by 19.9 percent of the women with cyclic pain. Significantly more

( $P < .001$ ) women with moderate or severe cyclic pain sought medical advice than women with mild cyclic pain (33 vs 10.6 percent). Only 1 woman (0.4 percent) reported missing work or social activities because of cyclic breast pain.

## Discussion

Cyclic breast pain is a common symptom in women of reproductive age, occurring in slightly fewer than one half of all menstruating women surveyed. In this study women with cyclic pain were slightly older than women without cyclic pain. The reason for this age relationship is unknown. There is great variation in the reported pain of cyclic mastalgia. In many women the pain is severe enough to cause them to seek medical attention.

Cyclic mastalgia generally occurs before or during menstruation, undoubtedly because the female breast has maximal sensitivity at this time.<sup>5</sup> The pathogenesis of cyclic mastalgia is unknown. It was thought previously that psychologic factors were important, but a recent study showed that women with cyclic mastalgia were not neurotic.<sup>6</sup>

This study helps confirm that larger breast size is not related to cyclic mastalgia.<sup>7</sup> Fluid retention has been proposed as a cause for the pain. Although breast volume has been shown to increase before menstruation,<sup>8</sup> one study showed no increase in total body water in women with cyclic mastalgia.<sup>9</sup> A lowered caffeine intake has been reported to decrease the pain of fibrocystic disease.<sup>10,11</sup> This study showed no relationship between cyclic pain and caffeine intake, height, weight, parity, breast-feeding, or smoking.

For most women with mild cyclic mastalgia, the traditional therapy of a brassiere that gives adequate support, nonprescription analgesics, and reassurance is probably sufficient.<sup>7</sup> For women with severe cyclic mastalgia, progesterone,<sup>12</sup> bromocriptine,<sup>13-15</sup> and danazol<sup>16,17</sup> have been reported to be effective, although none is approved for the treatment of breast pain alone. These medications also have significant side effects. Vitamin E has been reported to decrease cyclic breast pain in patients with mammary dysplasia in one study.<sup>18</sup> Several women in the present study noted that they were using vitamin E and that it seemed to help them. Further studies are needed to confirm its effectiveness. Because of the high prevalence of cyclic breast pain and the number of women seek-

ing medical attention for this problem, further studies should be done to discover the pathophysiology of cyclic breast pain and safe, effective treatment.

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