

MRI Increases Mastectomy in Early Breast Cancer

BY SHARON WORCESTER
Southeast Bureau

Preoperative magnetic resonance imaging may be a factor in the rising rate of mastectomy in women with early-stage breast cancer, a study suggests.

Investigators reviewed 5,596 stage 0-II breast cancers in 5,463 women who underwent surgery for the malignancy between 1997 and 2006 at the Mayo Clinic in Rochester, Minn. They found mastectomy rates decreased from 45% in 1997 to 30% in 2003, but then increased to 43% in 2006.

The rebound occurred in tandem with a doubling in the percentage of women who underwent preoperative breast MRI, investigator Matthew Goetz noted in a preview of the findings during a press briefing conducted by the American Society of Clinical Oncology (ASCO).

The study at ASCO's annual meeting. Its abstract was among thousands posted on the society's Web site in advance of the meeting. Under a new ASCO policy, only plenary and late-breaking abstracts have yet to be posted.

Dr. Goetz and his colleagues at the Mayo Clinic reported that 11% of women studied in 2003 underwent preoperative breast MRI, compared with 22% in 2006.

Patients who underwent preoperative breast MRI were significantly more likely to undergo mastectomy than were those who did not undergo preoperative breast MRI (52% vs. 38%). A similar increase in mastectomy rates was seen, however, in those who did not undergo preoperative MRI, with those rates increasing from 28% in 2003 to 41% in 2006.

After adjustment for age, stage, contralateral breast cancer, and density, preoperative MRI was found to be an independent predictor of mastectomy (odds ratio 1.7). Surgical year was also found to be a predictor of mastectomy: Odds ratios vs. 2003 for mastectomy were 1.4 for 2004, 1.9 for 2005, and 1.7 for 2006.

Dr. Goetz noted that other factors might also play a role in the increasing number of women undergoing mas-

tectomy. He cited patient preference—some women choose mastectomy over lumpectomy to maximize their risk reduction—and changes in medical procedures and technologies, such as improved breast reconstruction options and the introduction of genetic testing.

Dr. Julie Gralow, chair of the ASCO Cancer Communications Committee and moderator of the press briefing, said studies have shown that when breast MRI is performed at the time of early-stage breast cancer diagnosis, more cancer is found in the breast known to be affected and in the contralateral breast than is found on mammography. "These surgeries based on MRI [may be] appropriate."

MRI referral bias might also play a role in the increased mastectomy rates, said Dr. Gralow of the University of Washington and the Fred Hutchinson Cancer Research Center, both in Seattle. ■



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DR. GRALOW

Leptin, Ghrelin Levels Eyed In Amenorrheic Athletes

BY ALICIA AULT
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SAN FRANCISCO — Athletic teenage girls who are amenorrheic have higher ghrelin and lower leptin levels than do athletic girls who are eumenorrheic or girls who are nonathletic, according to a small study.

The findings could help tease out which girls are more likely to stop menstruating, study investigator Dr. Madhusmita Misra of Harvard Medical School, and a pediatric endocrinologist at MassGeneral Hospital for Children, Boston, reported at the annual meeting of the Endocrine Society.

She and her colleagues aimed to determine whether ghrelin, which stimulates appetite, and leptin, which suppresses appetite, might be related to amenorrhea in young women, especially those with intense energy expenditures and a heightened need for caloric intake. Ghrelin levels have been shown to be increased in people with anorexia nervosa, and higher levels also have been linked to impaired secretion of hormones that regulate menstrual and ovarian function.

"The hormonal factors that link energy deficit and the stopping of periods in athletes are not well characterized," said Dr. Misra, during the meeting.

It is especially important to tease out the relationships, given that evidence suggests that amenorrhea causes infertility and early onset of low bone density, she said.

About 25% of female high school athletes experience an absence of menstruation.

Dr. Misra and colleagues enrolled 21 girls who were amenor-

rheic athletes, 19 eumenorrheic athletes, and 18 nonathletic controls. They were aged 12-18 years. Fasting blood was drawn to measure ghrelin, leptin, estradiol, testosterone, and follicle-stimulating hormone levels.

The two athletic groups had similar activity levels, which were higher than that for the control group of nonathletes. The athletes were 85% of ideal body weight for their age.

The amenorrheic girls weighed less and had lower body mass index scores than did eumenorrheic girls. They also had slightly disordered eating behaviors, including dieting, but no use of laxatives or medications to lose weight.

As predicted, the amenorrheic girls had lower leptin levels—half those of the other two groups—and their ghrelin levels were twice those of the other two arms. The girls with the highest ghrelin levels and lowest leptin levels also had the lowest levels of estrogen and of follicle-stimulating hormone, she said.

In an interview, Dr. Misra said that it was not clear whether these hormone disturbances existed before the onset of amenorrhea, but that she was leaning toward a hypothesis that the hormone disturbances are an adaptive response in some girls. And, these girls might have an intrinsic abnormality that causes that response in the face of energy demands.

The study was funded by the National Institutes of Health. Dr. Misra has applied to the NIH for funding of a prospective study more closely examining energy availability and its affect on hormones.

She reported no conflicts related to this study. ■

Citalopram Seems Effective in the Reduction of Hot Flashes in Trial

BY KERRI WACHTER
Senior Writer

CHICAGO — Citalopram may be an effective option for reducing hot flashes, having performed twice as well as placebo in a randomized, placebo-controlled phase III trial conducted by the North Central Cancer Treatment Group.

"Hot flash relief can be obtained with as little as 10 mg/day citalopram," Debra Barton, Ph.D., of the Mayo Clinic in Rochester, Minn., and her coauthors concluded in a poster reporting results of the trial (NCCTG N05C9) at the annual meeting of the American Society of Clinical Oncology.

A selective serotonin reuptake inhibitor (SSRI), citalopram (Celexa) is approved for depression, but is also used for some other disorders.

Postmenopausal women who had a history of breast cancer or wanted to avoid hormones due to breast cancer risk were enrolled in the study. They had to have at least 14 hot flashes per week for at least 1 month. Endocrine therapy was allowed, if the woman was on a stable dose for at least 1 month. No other antidepressants or hot flash therapies were permitted.

All 254 participants kept a record of their hot flashes for 1 week before starting treatment. The investigators randomized the women into four groups that received either (group 1) 10 mg/day of citalopram on weeks 2-7, (group 2) 10 mg/day of citalopram during week 2 followed by 20 mg/day of citalopram for weeks 3-7, (group 3) 10 mg/day of citalopram during week 2 followed by 20 mg/day for week 3 and 30 mg/day for weeks 4-7, or (group 4) placebo.

The placebo group comprised 83 women; each citalopram arm had 57 women. Most participants were 50 years or older (81%) and white (89%). A third of the women (34%) had a history of breast cancer. Nearly half the women (48%) had 4-9 hot flashes per day, another 38% had 10 or more per day, and 13% had less than 4 per day (13%). Mean baseline hot flash score and

frequency were comparable between the groups.

The primary outcome was hot flash score as measured with a daily hot flash diary. Secondary outcomes included data from Hot Flash Daily Interference and Profile of Mood States measures, and from a symptom experience diary.

Women in the placebo group had a mean hot flash score reduction of 23%. Those in the 10-mg, 20-mg, and 30-mg citalopram groups had mean reductions of 49%, 50%, and 55%, respectively, with the differences relative to placebo being statistically significant for all three citalopram groups.

The mean reduction in hot flash frequency was 20% for the placebo group. The mean reductions for the 10-mg, 20-mg, and 30-mg citalopram groups were 46%, 43%, and 50%, respectively. All three comparisons to placebo were statistically significant.

The researchers also looked at quality of life measures. On the Profile of Mood States measure, women in the citalopram arms had greater improvement from baseline than did those in the placebo group on the tension/anxiety subscale, though the difference was only significant for the 20-mg citalopram group. Likewise, women in the citalopram arms had greater improvements from baseline than did those in the placebo group on the anger/hostility subscale, though the difference was only significant for the 10-mg arm.

On the Hot Flash Daily Interference Scale, women in the citalopram arms generally had greater improvements from baseline than did those in the placebo group on measures of work, social, leisure, sleep, mood, concentration, relationships, sexuality, enjoyment of life, and overall quality of life. Women on any dose of citalopram also had significantly greater improvements in abnormal sweating ($P = .05$), hot flash distress ($P = .003$), and hot flash control ($P = .04$) than did women in the placebo group. There were no significant differences in self-reported adverse events between the groups. The authors reported that they had no conflicts of interest. ■



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DR. BARTON