



Acupuncture Relieves AI-Related Aches

BY ED SUSMAN

VIENNA—Acupuncture treatments appear to relieve the common musculoskeletal discomfort experienced by women taking aromatase inhibitors (AIs) to reduce the risk of recurrent breast cancer, researchers reported in a small, single-arm study here at the St. Gallen International Cancer Conference.

As shown in the poster study by Giovanni Giardina, MD, Senior Assistant in Oncology at Ospedale di Circolo e Fondazione Macchi in Italy, all women with self-reported musculoskeletal pain who were treated with acupuncture techniques reported improvement in pain and quality of life on validated assessment instruments.

He and his coauthors enrolled 17 women in the study, and reported on outcomes for 16, all of whom were experiencing musculoskeletal pain as a result of long-term therapy with aromatase inhibitors. The women ranged in age from 49 to 78, with a median of 62.

"All patients had a significant improvement of musculoskeletal aromatase inhibitor-related pain," Giardina reported, "and our study suggests that acupuncture may be a promising modality for relieving aromatase inhib-

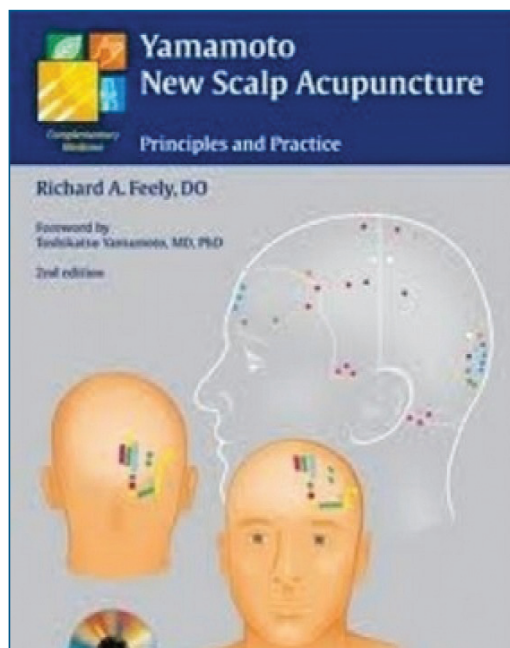
itor-related musculoskeletal side effects.

"It was quite easy to recruit women for the study because musculoskeletal pain is frequent in women taking aromatase inhibitors; the reduction of quality of life is a clinical issue and the patients have to make a choice between an effective therapy and the impairment of their daily quality of life."

He said his clinic now routinely offers the procedure to women with such musculoskeletal pain, and that there have been no significant side effects.

Giardina noted that while AIs are recommended as part of the adjuvant treatment of hormone-sensitive early breast cancer, "a consistent proportion of patients may experience musculoskeletal symptoms that can lead to discontinuation of this effective therapy or to a reduction of quality of life.

"We believe that acupuncture may be offered to all patients who experience that side effect, because is a safe and effective treatment," he said.



Cover of a book on the specific technique, published by Thieme

'Yamamoto New Scalp Acupuncture'

The Italian research team used an acupuncture technique known as Yamamoto New Scalp Acupuncture, a system of acupuncture that evolved in the 1960s and 1970s through the work

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VABS

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of Excellence at Milpark Hospital in Johannesburg, South Africa, said: "This is quite a fascinating study. As I looked at this poster, I was thinking it would be nice to work in Japan where I might have all the time and the fi-

nances to perform this type of procedure. This is going to take a lot of time to perform, and I just don't think it is practical in the environment in which I work, and probably in quite a bit of the rest of the world as well."

He said that even doing the procedure through endoscopic means there will still be a need for some form of

reconstruction. "If you are taking breast tissue out, the breast is going to look a bit off, even if there is a small incision."

Cassell said that she thinks the endoscopic procedure may be oncologically sound, but "we are only talking about 400 procedures, and that is a very, very small number." ■

Methodology

In the study, Yamashita and colleagues performed the procedure on women with a mean age of 50.2. The mean tumor size was 2.2 centimeters. About 80 percent of the women had negative lymph node involvement; 65.5 percent had estrogen receptor-positive disease; and about 25 percent were HER2-receptor positive.

A comparison of the patients undergoing the VABS treatment with patients who underwent conventional

treatments found no significant differences in patient demographics or disease characteristics.

Yamashita said the technology developed by his research team in Japan is usually employed for treatment of partial mastectomy, breast-conserving surgery. "When the tumor exists in the medial or lower side of the breast, we usually use the peri-areolar incision for the endoscopic lumpectomy, but that often makes deformation or malposition of the

nipple and the areola, and sensory disturbance around them.

"We devised the trans-axillary retro-mammary approach with VABS. We make a 3D image of the enhanced breast tumor and make a virtual endoscopic mode of it. These two images are fused to navigate. It needs only one skin incision in the axilla and can treat any tumor, even in the medial or lower side of the breast, without making any injuries on the breast skin, and it can preserve skin touch sensation."

NEW INSIGHTS INTO DEADLY FORM OF ALL

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“Striking on-target sensitivity was achieved with the BCL2-specific inhibitor venetoclax, suggesting new treatment options.”

“Drug response profiling of matched patient-derived xenografts revealed a distinct profile for TCF3-HLF ALL with resistance to conventional chemotherapeutics but sensitivity to glucocorticoids, anthracyclines, and agents in clinical development,” the researchers wrote, led by Ute Fischer, MD, of Heinrich Heine University in Germany.

“Striking on-target sensitivity was achieved with the BCL2-specific inhibitor venetoclax (ABT-199). This integrated approach thus provides alternative treatment options for this deadly disease.”

The team, from Germany, Switzerland, France, the U.K., Italy, Austria, Turkey, China, and the Czech Republic, also collaborated with Alacris Theranostics GmbH, which has conducted an in-depth analysis of the molecular features of the t(17; 19) ALL subtype.

As explained in a news release, the consortium team decoded the genome of the leukemic cells using bioinformatics methods and found genetic

aberrations in addition to the known translocation.

“We are glad that we could contribute to this important project with genomic data analysis of leukemia cells to unravel some of the molecular changes



in this disease,” said Alacris CEO Bodo Lange, PhD.

The expression profile of the cancer cells was deciphered with RNA sequencing, a focus of research of another of the coauthors, Marie-Laure Yaspo, PhD, of Max Planck Institute for Molecular Genetics in Berlin.

Relevant Molecular Mechanisms

“The interplay between the fused TCF3-HLF oncogenic protein, additional DNA changes, and altered gene expression program leads to a re-programming of leukemic cells to an early, stem-cell like developmental stage, although the phenotypic appearance of the cells remains similar,” she said.

“This technique provides a quantitative read-out of the actual genetic program occurring in the cancer cells, which allowed us to uncover relevant molecular mechanisms cooperating to promote tumorigenesis, and identify possible druggable targets. These findings could be achieved only through analysis of the messenger RNAs.”

The project was funded by the German Federal Office for Radiation Protection via the environmental research program of the German Federal Environment Ministry and by the Swiss National Science Foundation.

ACUPUNCTURE

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of Japanese physician and scientist Toshikatsu Yamamoto.

“The method proposed by Yamamoto is based on a somatotype on the scalp, in the same way as with ear or mouth acupuncture,” Giardina explained. “The theory is that the entire locomotor system is at the boundary of the forehead and hair, whereas the internal organs are represented via ypsilon points on both temples.”

Proof of Principle

Asked for her perspective, Valerie Jenkins, PhD, a senior research fellow at Brighton & Sussex Medical School in England, said the study represents a proof of principle. Still, there was no control group, so it is difficult to

determine if the improvements patients had was a placebo effect—“However, it is encouraging that all the patients appeared to improve, which would indicate that there could be an effect with acupuncture.”

among women taking aromatase inhibitors is not new, of course—“going back to at least as early as the ATAC [Arimidex, Tamoxifen, Alone or in Combination] trial that established the benefit of the aromatase inhibi-

Giovanni Giardina, said his clinic routinely offers the procedure to women with AI-related musculoskeletal pain, and there have been no significant side effects.

Jenkins, who specializes in the impact cancer and therapies have on quality of life, added that the phenomenon of musculoskeletal pain

tors. But these aches and pains may be underappreciated.”

She said she would like to now see a controlled trial. “The patients seemed to stick to this treatment and didn’t drop out. Many women report these musculoskeletal side effects, and treatment to relieve these pains is suboptimal. It would be interesting if a treatment such as acupuncture would have an impact.”

Giardina said he and his colleagues were not planning any further studies to assess the effectiveness of the use of acupuncture: “Our endpoint was a simple evaluation of the efficacy of acupuncture compared with baseline.”

Signs of Improvement

Improvement was seen in all four of these objective measures:

	Baseline	At 3 Weeks	At 6 Weeks
Brief Pain Inventory-Short Form	7.0	4.6	3.5
Health Assessment Questionnaire	11.0	6.7	5.6
Functional Assessment of Cancer Therapy-General (FACT-G) Quality-of-Life	20.0	22.8	23.6

In addition, the Visual Analog Scale stiffness scores improved from 72.4 at baseline to 40.6 at three months and 28.9 at 12 months.