Aromatase inhibitors may reduce endometrial cancer risk

Use of aromatase inhibitors, which are known to reduce endogenous oestrogen levels, as adjuvant therapy had a lower risk of endometrial cancer, compared with that of patients who were treated with tamoxifen, results of a new study show.

In this study, Rowan Chlebowski and colleagues (Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center, Los Angeles, CA, USA) examined the records of 17,064 patients over 21 (2·7–9·0) years who were members of a community-based health plan. 148 (0·87%) patients developed endometrial cancer during the study. All patients were post-menopausal and had hormone-positive breast cancer.

In the subset of 14,245 patients exposed to the endocrine treatments, the incidence of endometrial cancer was 48% lower in patients treated with the aromatase inhibitor only, compared with the tamoxifen group (hazard ratio 0·52, 95% CI, 0·31–0·87, p=0·01).

“These results are reassuring, as they come from a real-world setting”, says Clifford Hudis (Memorial Sloan-Kettering Cancer Center, New York, NY, USA). “On the biological front, we might predict that aromatase inhibitors would not cause endometrial cancer as they lower oestrogen levels below baseline. Tamoxifen’s effects are more complicated, with oestrogen-blocking effects in the breast, but oestrogen-like effects in the uterus, which causes hyperplasia”, Hudis adds. For this reason, aromatase inhibitors are through to be more effective in reducing oestrogen levels than is tamoxifen.

The results of this trial confirm and expand results from four previous trials, that endometrial cancer risk is greater in women with higher endogenous levels of oestrogen, Chlebowski continues, adding that the implications of this trial might extend beyond the breast cancer population.

“An intervention that can lower the risk of both breast and endometrial cancer in post-menopausal women, a third of whom are obese and therefore at higher risk for both cancers, could make a significant impact as a chemoprevention. The post-menopausal, obese population is already at risk for breast and endometrial cancers”, Chlebowski comments.

Hudis recommends that although aromatase inhibitors are superior to tamoxifen in reducing risk of endometrial cancer, the risk-benefit ratio and effects on quality of life of both drugs must be assessed in individual cases.

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