Green Tea Extract Appears to Keep Cancer in Check in Majority of CLL Patients

Mayo Clinic has conducted the first clinical studies of tea extract in cancer patients

Friday, June 04, 2010

ASCO Abstract Number: 6522

CHICAGO — An extract of green tea appears to have clinical activity with low toxicity in chronic lymphocytic leukemia (CLL) patients who used it in a phase II clinical trial, say researchers at Mayo Clinic.

"Although only a comparative phase III trial can determine whether EGCG can delay progression of CLL, the benefits we have seen in most CLL patients who use the chemical suggest that it has modest clinical activity and may be useful for stabilizing this form of leukemia, potentially slowing it down," says Tait Shanafelt, M.D., a Mayo Clinic hematologist and lead author of the study.

"These studies advance the notion that a nutraceutical like EGCG can and should be studied as cancer preventives," says Neil Kay, M.D., a hematology researcher whose laboratory first tested the green tea extract in leukemic blood cells from CLL patients. "Using nontoxic chemicals to push back cancer growth to delay the need for toxic therapies is a worthy goal in oncology research — particularly for forms of cancer initially managed by observation such as CLL."

Drs. Shanafelt and Kay caution that EGCG is not a substitute for chemotherapy. All of the patients Mayo tested with EGCG were early stage, asymptomatic CLL patients who would not otherwise be treated until their disease progressed. The extract was supplied by the National Cancer Institute (NCI) and Polyphenon E International for these initial clinical trials.

"In all, 69 percent of CLL patients had a biological response to EGCG as evidenced by a 20 percent or greater sustained reduction in blood lymphocyte count and/or a 50 percent or greater reduction in lymph node size, the researchers say.

Because EGCG was being studied in patients who did not otherwise need treatment, the researchers took a rigorous approach toward studying side effects. Most clinical trials of therapeutic agents only report grade 3 and higher side effects, but the researchers looked at and reported grade 1 and grade 2 as well. While a number of patients had transient grade 1 or 2 side effects, only three of 42 experienced a grade 3 side effect during their six months of treatment.

"All in all, the treatment was well tolerated with very mild side effects in most patients," Dr. Shanafelt says.

The researchers say that the prior publications on the effects of EGCG on CLL leukemia cells in the laboratory and the data from the published phase I study have been widely disseminated via the Internet by patient advocacy groups. Based on information from patients and colleagues throughout the country, the Mayo researchers have become aware that many CLL patients nationwide have started to use EGCG supplements, which are readily available over the counter.

"Without a phase III clinical trial, we cannot make a recommendation that EGCG be used by CLL patients, but those who want to take supplements should consult with their oncologists and need to receive appropriate monitoring using laboratory tests," Dr. Kay says.

The study was funded by grants from the NCI, the Mayo Comprehensive Cancer Center, and from donors and patient advocacy foundations. The authors declare no conflicts of interest.

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