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New therapy prevents dangerous side effect for lymphoma patients

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Patients respond well to a new three-drug combination for indolent B cell lymphoma that also spares them prolonged, potentially lethal, suppression of blood production in the bone marrow, researchers at The University of Texas M. D. Anderson Cancer Center report today at the 50th annual meeting of the American Society of Hematology.

Pentostatin, cyclophosphamide and rituximab together are providing the same remission rate as other combinations but with minimal long-term bone marrow suppression, said study presenter Felipe Samaniego, M.D., associate professor in M. D. Anderson's Department of Lymphoma and Melanoma.

Myelosuppression leads to production of fewer red blood cells, white blood cells and platelets. When prolonged, it can lead to myelodysplastic syndrome, which comprises several conditions that cause potentially lethal insufficient blood production.

"The worst outcome of long-term myelosuppression for indolent B cell lymphoma patients is myelodysplastic syndrome," Samaniego said. "In this study, out of 80 patients, none developed MDS."

And 77 of 80 (96 percent) experienced either complete remission or unconfirmed complete remission. Some did have low blood counts, but all were short-term. Overall, the combination is well-tolerated, the research team reported.

Prolonged myelosuppression also makes treatment much more difficult if a patient's lymphoma recurs, Samaniego said. "Patients treated with myelosuppressing agents have a difficult time tolerating another round of chemotherapy if their lymphoma comes back."

Indolent B cell lymphomas comprise follicular lymphoma, small lymphocytic lymphoma, and marginal zone lymphoma. These slow-growing but potentially lethal cancers are the most common form of non-Hodgkin lymphoma.

Samaniego and colleagues have been testing new drug combinations against indolent B cell lymphoma that reduce myelosuppression.

Two years ago, a combination of fludarabine, mitoxantrone and dexamethasone with rituximab and interferon alpha reduced the incidence of MDS to 4 percent of patients, down from a historical rate of around 10 percent.

The key ingredient in pushing the MDS rate to zero, Samaniego says, was substitution of fludarabine with pentostatin. Both are nucleoside analogs, which interfere with DNA reproduction, and target lymphoid cells, making them attractive drugs for lymphomas.

Earlier research indicated that pentostatin is less toxic to bone marrow than other members of this drug class.

"The PCR combination is a very promising therapy for indolent B cell lymphoma," Samaniego said.

Source: University of Texas M. D. Anderson Cancer Center