Novel treatment for skin lymphoma

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Promising findings on a novel combination treatment approach for a chronic type of skin lymphoma are being published today (embargoed for 4 pm) in JAMA's *Archives of Dermatology* by clinical researchers from Seidman Cancer Center at University Hospitals (UH) Case Medical Center and Case Western Reserve University School of Medicine.

The article outlines findings from a first-of-its-kind study showing that O6-benzylguanine is successful in treating cutaneous T-Cell lymphoma by enhancing the efficacy of topical chemotherapy (carmustine).

"Current therapy for cutaneous T-Cell lymphoma is suboptimal and this new study shows that adding O6-benzylguanine to carmustine is more effective and less toxic to the skin, allowing for more optimal treatments," says Kevin Cooper, MD, Chairman of the Department of Dermatology at UH Case Medical Center and Case Western Reserve University School of Medicine. "This treatment essentially weakens the cancer cells to make the lymphoma more vulnerable to topical chemotherapy and has a lot of potential in alleviating patients' disease burden in this chronic and progressive disease."

Cutaneous T-cell lymphoma is a form of lymphoma which affects the skin and typically relapses and becomes increasingly challenging to treat. The new drug combination offers a potential new option for patients using skin-directed treatments, before the need to undergo systemic chemotherapy.

Clinical researchers at UH Case Medical Center and Case Western

Reserve University have been investigating O6-benzylguanine over the past decade and were participants in the original research into its mechanism of action as a cancer treatment potentiator. This study, funded by National Cancer Institute grants to Case Western Reserve University in conjunction with Keryx Pharmaceuticals Inc., is the first to explore the drug's efficacy to intensify treatment for skin lymphoma.

When used alone, carmustine attaches to the DNA in the patient's cancer cells during the replication process, causing the cancer cells to die. Problems sometimes occur when an enzyme clips off the treatment from the DNA, allowing the cancer cells to replicate. O6-benzylguanine inhibits the enzyme from clipping off the carmustine from the DNA, so the drug can complete its mission and kill the cancer cells.

"By adding O6-benzylguanine, we can effectively lower the dosage of the topical treatment, carmustine, and render it less toxic on healthy cells but more effective at killing cancer cells," says Dr. Cooper. "This combination treatment has had excellent initial clinical results and we are following it up with additional ongoing studies."

Provided by University Hospitals Case Medical Center