- J Nutr. 2006 Mar;136(3 Suppl):803S-805S

Aged garlic extract is a potential therapy for sickle-cell anemia.

Takasu J, Uykimpang R, Sunga MA, Amagase H, Niihara Y.
Department of Medicine, Harbor-UCLA Medical Center, UCLA School of Medicine, Torrance, CA 90502, USA.

Sickle-cell anemia is one of the most prevalent hereditary disorders with prominent morbidity and mortality. Oxidative phenomena play a significant role in the disorder's pathophysiology. A forumlation of garlic (Allium sativum), AGE, has been reported to exert an antioxidant effect in vitro. We evaluated the antioxidant effect of AGE on sickle red blood cells (RBCs). Five patients (two men and three women, mean age 40+/-15 years, range 24-58 years) with sickle-cell anemia participated in the study. AGE was administered at a dose of 5 mL daily. Whole blood samples were obtained at baseline and at 4 wk, primarily for Heinz body analysis. In all patients, the number of Heinz bodies decreased over the 4-wk period (58.9+/-20.0% at baseline to 29.8+/-15.3% at follow-up; P=0.03). These data suggest that AGE has a significant antioxidant activity on sickle RBCs. AGE may be further evaluated as a potential therapeutic agent to ameliorate complications of sickle-cell anemia.

Publication Types: Clinical Trial, Research Support, N.I.H., Extramural
PMID: 16484568 [PubMed - indexed for MEDLINE]

- BMC Blood Disord. 2002 Jun 19;2(1):3

Aged garlic extract therapy for sickle cell anemia patients.

Takasu J, Uykimpang R, Sunga M, Amagase H, Niihara Y.
Department of Medicine, Harbor-UCLA Medical Center, UCLA School of Medicine, Torrance, CA.

BACKGROUND: Sickle cell anemia is one of the most prevalent hereditary disorders with prominent morbidity and mortality. With this disorder oxidative, phenomena play a significant role in its pathophysiology. One of the garlic (Allium sativum L.) formulations, aged garlic extract (AGE), has been reported to exert an anti-oxidant effect in vitro, we have evaluated the anti-oxidant effect of AGE on sickle red blood cells (RBC). METHODS: Five patients (two men and three women, mean age 40 ± 15 years, range 24-58 years) with sickle cell anemia participated in the study. AGE was administered at a dose of 5 ml a day. Whole blood samples were obtained at baseline and at 4 weeks for primarily Heinz body analysis. RESULTS: The data were consistent with our hypothesis. In all patients, the number of Heinz bodies decreased over the 4 week period (58.9 ± 20.0% at baseline to 29.8 ± 15.3% at follow-up, p = 0.03). CONCLUSIONS: These data suggest that there is a significant anti-oxidant activity of AGE on sickle RBC. AGE may be further evaluated as a potential therapeutic agent to ameliorate complications of sickle cell anemia.

PMID: 12086586 [PubMed - as supplied by publisher]