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Evaluation of allicin for the treatment of experimentally induced subacute lead poisoning in sheep

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View references (۳۸)

Abstract

Garlic (Allium sativum) is known to reduce lead toxicity in some species of animals. The objective of this study was to evaluate the efficacy of allicin, one of the most active components of garlic, in the treatment of subacute lead intoxication in sheep. Nine female sheep weighing ۲۵-۲۹ kg orally received a daily dose of ۸۰ mg/kg body weight of lead acetate for ۵ days. The animals were then assigned into two groups. Group ۱ did not receive any further treatment and was used as the control group and group ۲ was treated orally by ۲,۷ mg/kg body weight of allicin twice daily for ۷ days. Within one day following allicin treatment, group ۲ blood lead levels were significantly lower than that in group ۱ (mean of ۶۱۶,۹ μg/l and ۲۹۰,۰۲ μg/l, respectively; P < ۰,۰۵). Also, allicin treatment significantly reduced kidney lead content and considerably reduced bone and ovary lead contents. These results suggest that allicin might have some therapeutic effects on lead poisoning. © ۲۰۰۸ Humana Press Inc.

Reaxys Database Information

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Author keywords

Allicin; Lead chelation; Lead poisoning; Sheep; Tissue lead content

Indexed Keywords

EMTREE drug terms: allicin; calcium; copper; lead; lead acetate; magnesium; zinc; sulfinic acid derivative

EMTREE medical terms: animal experiment; animal model; animal tissue; article; body weight; controlled study; drug effect; drug efficacy; female; lead blood level; lead poisoning; mineral blood level; nonhuman; sheep; animal; bone; kidney; metabolism; ovary

Species Index: Allium sativum; Animalia; Ovis aries

MeSH: Animals; Bone and Bones; Female; Kidney; Lead Poisoning; Ovary; Sheep; Sulfinic Acids
Medline is the source for the MeSH terms of this document.

Chemicals and CAS Registry Numbers: allicin, ۵۳۹-۸۶-۶; calcium, ۷۴۴۰-۷۰-۲; copper, ۱۵۱۵۸-۱۱-۹, ۷۴۴۰-۵۰-۸; lead, ۷۴۳۹-۹۲-۱; lead acetate, ۱۵۳۴۷-۵۷-۶, ۳۰۱-۰۴-۲; magnesium, ۷۴۳۹-۹۵-۴; zinc, ۷۴۴۰-۶۶-۶;allicin, ۵۳۹-۸۶-۶; Sulfinic Acids

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