

METALS

Randomized Placebo-Controlled Trial of 2,3-Dimercapto-1-propanesulfonate (DMPS) in Therapy of Chronic Arsenicosis Due to Drinking Arsenic-Contaminated Water

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ABSTRACT

Background: Chronic arsenic toxicity, producing various clinical manifestations, is currently epidemic in West Bengal, India, Bangladesh, and other regions of the world. 2,3-Dimercapto-1-propanesulfonate, a chelating agent, increases excretion of arsenic in urine to several times the prechelation concentration but the therapeutic efficacy of 2,3-dimercapto-1-propanesulfonate in the management of chronic arsenic toxicity has been incompletely evaluated. We investigated the clinical use of 2,3-dimercapto-1-propanesulfonate in such patients. **Methods:** Twenty-one consecutive patients with chronic arsenicosis were individually randomized into 2 groups: 11 patients (9 males and 2 females, age 30.63 ± 11.4 years) received 2,3-dimercapto-1-propanesulfonate 100-mg capsules 4 times a day for 1 week and repeated in the 3rd, 5th, and 7th week with no drug during the intervening period. The other 10 patients (5 males and 5 females, age 34.4 ± 14.41 years) were given placebo capsules (resembling 2,3-dimercapto-1-propanesulfonate) in the same schedule. The consumption of arsenic-contaminated water was terminated by all 21 subjects. Initial and posttreatment urinary arsenic excretion was determined in all cases. Sequential excretion of urinary arsenic was determined during the treatment

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