



EPIDEMIOLOGY

MICRONUTRIENT INTAKES PATTERN OF ARSENICOSIS PATIENTS: A CROSS-SECTIONAL STUDY IN AN ARSENIC-ENDEMIC REGION OF BANGLADESH

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Introduction and Objectives: Arsenic exposure is a major public health problem affecting many countries like Bangladesh. Micronutrient deficiencies may be associated with increased arsenical manifestations. The objective of the present study was to assess the micronutrient intakes pattern of arsenicosis patients in an arsenic-endemic region of Bangladesh.

Materials and Methods: A multiple pass recall (MPR) staged approaches for 24-hour dietary recall was conducted among 102 arsenicosis patients in an arsenic-endemic region of Bangladesh.

Results: Alarmingly very low median intake of calcium (as low as 220.3 mg/d), about 5 times lower than the Recommended Dietary Allowance (RDA: 1100 mg/d), in the diets was observed among these arsenicosis patients. The median daily intake of zinc (7.1 mg; RDA: 11.0 mg) and iron (9.8 mg; RDA: 18.0 mg) were also found inadequate compared to the RDA for the adult. Folate intake was also found very inadequate (as low as 117.2 µg/d; RDA: 400 µg/d); about 3.5 times lower than the RDA of an adult. Daily intake of vitamin D was also found grossly inadequate (0.21 µg; RDA: 15.0 µg). Median vitamin A intake, about 152.2 µg/d was about 6 times lower than the RDA (900.0 µg/d). Thiamin, riboflavin, and vitamin C intakes among these arsenicosis patients were estimated about half of the RDA for the adult. Moreover, bulk amount of cereals (mainly rice) intake (301.4 g/d) and minimal vegetables provided the most share of the vitamins in the diets of the arsenicosis patients.

Conclusion: Inadequate amount of calcium, zinc, folate, vitamin D, vitamin A, and B vitamins intakes were observed among the arsenicosis patients in the arsenic-endemic region in Bangladesh.

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