

Clinicopathological characteristics and survival outcome of arsenic related bladder cancer in Taiwan

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摘要

Abstract

PURPOSE: We compared clinicopathological characteristics and outcomes in patients with bladder cancer who were exposed to graded arsenic levels in drinking water. **MATERIALS AND METHODS:** From 1993 through 2006, 977 patients with bladder cancer in Taiwan were studied retrospectively. Patients were from 3 areas, including the core zone (arsenic related blackfoot disease endemic area with a well water arsenic level of 350 to 1,100 ng/ml), zone 1 (a well water arsenic level of 350 ng/ml or greater but not a blackfoot disease endemic area) and zone 2 (a well water arsenic level of less than 350 ng/ml). Clinicopathological characteristics and survival outcome were compared among the groups. **RESULTS:** Of these patients 81 (8.3%), 246 (25.2%) and 650 (66.5%) lived in the core zone, and zones 1 and 2, respectively. More high grade and high stage tumors were observed in core zone patients than in those in zones 1 and 2, including high grade in 48.7% vs 41.4% and 39.2% of patients, advanced disease in 39.5% vs 31.0% and 18.5% and nodal metastasis in 8.6% vs 3.3% and 3.4%, respectively. Median overall and cancer specific survival in core zone patients was significantly shorter than in patients in zones 1 and 2, including 69 vs 119 and 113-month overall survival and for the 75th percentile of cancer specific survival 34.5 vs 119 and 113 months, respectively. On multivariate analysis with adjustment for tumor grade and stage the zonal difference was not a significant factor for overall or cancer specific survival. **CONCLUSIONS:** Patients with arsenic related bladder cancer may have decreased overall and cancer specific survival because they have more unfavorable tumor phenotypes than patients in other areas in Taiwan.