
BACKGROUND: Ingestion of trivalent inorganic arsenic has long been recognized as a cause of basal cell carcinomas (BCCs) and has been reported most often in Taiwan and Singapore.

OBJECTIVE: Our purpose was to study the clinical and histologic characteristics of BCCs occurring in Australian Caucasians as a consequence of chronic arsenicism due to ingestion of an arsenic-containing medication.

METHODS: Self-referred persons with a history of ingestion of Bell's Asthma Medication were interviewed, and skin examinations were performed. Local age- and sex-matched patients with BCCs were used to compare the distribution and histologic subtypes of BCCs in arsenic-exposed and sporadic cases.

RESULTS: Thirty-six persons (21 male, 15 female; mean age, 57 years) participated, all of whom had been exposed to the asthma medication early in life (mean age, 13 years) for a mean duration of 5 years. Each person had at least one cutaneous sign of chronic arsenicism, either self-reported or on examination, and all except one had a history of either BCC or squamous cell carcinoma of the skin, with self-reports of 20 to 2000 skin lesions removed per person. The mean age at first presentation with a BCC was 33 years, but neither latency nor number of skin lesions appeared to be related to duration of exposure to arsenic. BCCs in persons exposed to arsenic occurred more often on sun-protected sites compared with BCCs in age- and sex-matched sporadic cases (P < .001), but the distribution and histologic subtypes between these two groups were similar.

CONCLUSION: We have described BCCs in arsenic-exposed Australians and shown that they occur predominantly in sun-protected locations. Although the reported number of skin lesions is very high, the latency and number do not appear to be related to the duration of arsenic exposure. The histologic types of the BCCs occurring in arsenic-exposed persons are not different from sporadic BCCs.