Arsenical Keratoses

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A 63-year-old farmer first noticed multiple rough bumps on his hands and feet at least 20 years before pointing them out to his physician. A diagnosis of arsenical keratoses was made after the patient reported that as a child he had worked on his family's potato farm, where a commonly used pesticide, “Paris Green,” was applied to the plants. The active ingredient in this pesticide was inorganic arsenic.

Arsenical keratoses can occur in approximately 50% of persons with long-term (more than 3 months' total exposure time) exposure to inorganic arsenic. The lesions are considered premalignant and have histologic changes similar to actinic keratoses/squamous cell carcinoma in situ. Cutaneous malignancies can arise within the lesions or develop de novo on the skin. Most commonly, squamous cell carcinomas will develop, but basal cell carcinomas also are associated with arsenic exposure. These lesions may increase the risk of internal malignancies of multiple organ systems, especially squamous cell carcinoma of the lung and mucosal surfaces. Affected patients need to undergo regular general internal screening examinations. The average time from arsenic exposure to keratotic development is between 5 and 10 years; the average time for the occurrence of the first malignancy is approximately 20 years. This patient's lesions were treated with cryotherapy. Oral acitretin may be tried as well.

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