The case of the black-speckled dolls: an occupational hazard of unusual sulphur metabolism.

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Abstract

A patient who made reproduction antique china dolls complained that wherever she touched the dolls' heads when painting them, black speckles appeared after the subsequent firing. Investigation by means of mass spectrometry and X-ray fluorescence showed that the clay was rich in iron, that the patient's sweat contained volatile sulphides whenever she ate garlic, and that the speckles consisted of iron and sulphur. The patient was shown to be a poor sulphoxidiser and was therefore unlikely to be able to excrete sulphur-containing breakdown products of garlic in her urine. The speckling phenomenon, which is not uncommon in 19th-century china dolls, is an example of an occupational hazard where the risk is to the product rather than the patient.

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