

RED TATTOOS AND SWORDFISH

With the increasing prevalence of both tattoos and Japanese restaurants in South Africa, the following case report from a recent edition of *The Lancet* may be of interest. A 40-year-old Japanese man presented to a dermatology department at a medical school in Japan with a whole-body rash. In addition, his chest, shoulders and upper arms were covered with tattoos, done 16 years previously. However, because the tattoos had started to fade, he had a second tattoo 3 months before presentation. He noticed itching at the site of the new tattoo. To complicate matters still further, 2 days before he was admitted he had eaten 250 g of raw swordfish and alfonso, and developed a pruritic eruption over his whole body.

The authors examined him and found elevated, crusted, lichenous macules coinciding with the red pigment of the tattoo and exudative erythema involving the whole skin. They did a series of metal patch tests and found that he had a positive reaction to 0.05% aqueous solution of mercury chloride. They also did radioallergosorbent tests (RASTs) to swordfish, codfish, tuna, salmon, sardine, king mackerel and saury — all of which were negative. The patient had no dental fillings. They found that his serum IgE was high.

Their working diagnosis was of contact dermatitis caused by an initial sensitisation to mercury in tattoo pigment, aggravated

by consumption of mercury-contaminated swordfish and alfonso. The patient received oral and topical steroids for 3 months and when last seen his erythema and macules had resolved.

As the authors point out, mercury contamination of fish is a global problem. Shark, swordfish, king mackerel, alfonso and tile fish are all known to contain high levels of mercury. On top of this, allergic reactions to the metal salts used in tattooing occur frequently. Mercury, chromium, cobalt and cadmium have been reported as contact sensitizers in tattooed areas. In particular, the red tattoo pigments cinnabar and vermilion are known to include mercury and can result in a delayed hypersensitivity reaction. Systemic contact dermatitis is the result of a systemically administered allergen reaching the skin from the circulatory system and producing a generalised rash. The authors go on to say that doctors should be aware of the potential for systemic contact dermatitis in those with red tattoos. And people with red tattoos should avoid eating predatory fish — which generally have high levels of mercury.

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SINGLE SUTURE

CHANGING CLIMATE, CHANGING DISEASE PATTERNS

An analysis of more than 300 human diseases has found that the distribution of pathogens around the world is strongly linked to climate, and that climate change could lead to a massive increase in human vector-borne disease. Diseases such as dengue fever, Japanese encephalitis and yellow fever were once under control and are now resurgent. Others, such as West Nile virus and Rift Valley fever are expanding their range. Still others such as Sabia virus are appearing in humans for the first time. The much-reported spread of West Nile virus across the USA has been linked to climate change. The first outbreak in New York in 1999 was preceded by a 3-week drought, providing ideal conditions for the vector, the mosquito *Culex pipiens*, to breed in sludge in dried-up drains. A study of the distribution of 332 human pathogens in 224 countries has found that climate and latitude were the most important predictors of the numbers of pathogens present, with pathogen diversity greatest in the tropics. Variability of rainfall was the climatic factor most closely linked to pathogen diversity, backing the idea that alternating wet and dry periods are a key factor in disease transmission.

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