The Case of the Mercury Heart

Magic must keep an important place in every-day life, even among youngsters, if cases like the one we describe here can still be observed.

CASE REPORT

A 25-year-old woman, without any history of atopy, was seen for an acute, intensely pruritic dermatitis which had begun on her prestenal area and had rapidly spread. On examination, she exhibited an erythematous-pustular dermatitis which was particularly severe on the cardiac, prestenal and submammary areas, abdomen, groins (Fig. 1) and midback. No systemic symptoms were present.

She referred that the rash had developd a few hours after wearing a small heart-shaped cloth amulet (Fig. 2) inside the left cup of her bra. The "heart" contained a few grains of rice, pieces of laurel leaves and droplets of metallic mercury taken from a dental amalgam. No history of previous medications with mercuriochrome or other mercurials was obtained.

Blood and urinary laboratory tests were normal, but the urinary mercury concentration, analyzed by atomic absorption spectroscopy, was 1 μg/l (50 μg/l is the limit for professional exposure).

Histopathology of a lesion showed slight spongiosis, edema of the papillary dermis and a superficial perivascular, lymphocytic and neutrophil infiltrate. Topical corticosteroids and oral antihistamines cleared the eruption in a few days.

Two weeks later, patch tests with the Italian standard series (GIRDCA) (including thimerosal) yielded negative results. Patch tests with a mercurial series revealed, at 48 h, a positive reaction to ammoniated mercury (1% in petrolatum) (++) and metallic mercury (0.5% in petrolatum) (+). Mercurochrome (0.05% in water) and phenymercuric acetate (0.01% in water) reacted weakly (+). In addition, an erythematous and pustular reaction developed the day after in the patch test site and spread to her groins and abdomen. As the patient treated herself with topical and oral corticosteroids, no reliable further readings of the patch tests were possible.

COMMENT

 Metallic mercury is promptly absorbed through the skin, both as a metal and vapour. Especially when applied under occlusion at body temperature, it may cause a generalized rash, particularly in patients sensitized to topical drugs containing mercurials (1).

According to Nakayama et al. (2), the mercuric exanthem appears a day or two after contact with metallic mercury. Usually, contact occurs during a dental treatment or because of a broken clinical thermometer. A previous sensitization to organic mercury (often mercuriochrome) is common. The clinical picture is typical, including a symmetrical erythema on the major flexures with a V-shaped erythema on the upper antero-medial
thighs, recalling the "baboon syndrome" (3). Severe cases show pustules or purpura. Systemic symptoms and fever may be present. Histopathology shows spongiosis and a superficial perivascular infiltrate of lymphocytes and neutrophils or a subepidermal pustule.

In our patient, the exanthem was clinically and histologically similar to the one reported by Nakayama et al. The Japanese authors consider it as a systemic contact dermatitis caused by inhalation of mercury vapoars. Indeed, our patient had an allergic contact dermatitis, as the positive results of patch tests suggest. However, two points differ from Nakayama et al.'s report: the particular severity of lesions where the amulet had been applied and, especially, the widespread eruption that followed patch-testing. They suggest that the transcutaneous absorption is also important to explain generalization.

REFERENCES

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**Kallin's Syndrome: Two More Cases**

Sir,

Kallin's syndrome was first described in 1985 and was characterized by epidermolysis bullosa simplex localisata, associated with anodontia, hair and nail disorders (1). In 1989 two siblings in a new family were admitted to the Department of Dermatology, Central Hospital, Boden, Sweden.

A boy, born in 1977, and his sister, born in 1981, had the localized epidermolysis bullosa simplex type. Their parents and family members were healthy and without inherited disorders. No relationship between this family and the one previously described could be traced. According to the parents neither inbreeding nor consanguineous marriages were found on either side of the families. The pedigree of the family is shown in Fig. 1a.

The father and mother had no history or signs of blisters, hair or nail disorders. A panoramic radiograph of the father's jaws showed that the following permanent teeth were missing: 15, 46, 47 and 28, 38. Radiograph of the mother's jaws was normal.

The boy developed at the age of 3 months poor, scanty growth of hair, which during the following years became dry and brittle with areas of non-scarring alopecia (Fig. 1b). At the age of 4 years blisters occurred spontaneously on hands and feet, leaving no scars after healing. Generally blisters occurred in the spring and summer and almost every year. Blisters were monolocular and sometimes hemorrhagic. Traumatic blisters were also observed. However, at the age of 10 years blistering decreased but did not completely disappear (Fig. 1c). Myopy and hyperhidrosis were observed when he was 4 years old, and at his first dental examination anodontia was established. A panoramic

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