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Unilateral Eruption of Endogenous Eczema after Hemiparesis

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Five patients with cerebrovascular hemiplegia developed an endogenous eczema (nummular eczema, pompholyx, allergids, atopic dermatitis). In all cases the dermatitis was mainly confined to the healthy side.

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Nummular eczema is an endogenous disease characterized by coin-shaped eczematous patches mainly occurring on the extensor aspects of extremities. The eczema often starts on the legs but usually spreads to arms and trunk. In the acute phase the lesions are pruritic and oozing, later become chronic and scaling. The clinical picture and presumed etiopathogenesis have been discussed for decades. The following etiologies have repeatedly been suggested: asteatosis, bacterial allergy, focal infection, venous insufficiency, ethylism, external irritants and infected wounds. The reader is referred to several good reviews (1–4).

Pompholyx or vesiculosis is another endogenous eczema in which, however, the itching and periodic eruptions are localized to the palms and/or the soles. Since in many cases the etiology is never demonstrated, they are often considered idiopathic; some, however, are attributed to atopy or "endogenous contact eczema" (5, 6). In our experience, pompholyx often accompanies an active nummular eczema, although this is seldom mentioned in text-books or reviews.

Deterioration of a hypostatic eczema of the lower leg, whether complicated by contact allergy or not, occurs primarily by local extension. Often this is followed by dissemination of papules or vesicles to arms, palms, face, etc. These so-called allergids were first described by Haxthausen (7).

The symmetric distribution of the eczematous eruption is very characteristic of endogenous eczema, be it nummular or atopic eczema, pompholyx or allergids. It therefore seems warranted to report 5 cases of different types of endogenous eczema with a unilateral distribution following hemiparesis.

CASE REPORTS (Fig. 1)

Case 1

Female, 94 years old. Cerebrovascular insult twice the same year, resulting in left hemiparesis. In this connection an itching nummular eczema developed on extensor aspects of extremities, predominantly on the right leg. One month later, residual patches were observed, mainly on the right leg. Grasset's sign was positive on the left side but neurologic examination was otherwise normal.

Case 2

Male, 64 years old. Left-sided cerebrovascular infarction, confirmed by computer tomography, resulting in right hemiparesis. A few months later, incipient nummular eczema on left arm and left side of the back. Follow-up 4 years later still showed active eczematous patches on both sides of extremities and trunk, but predominantly on the left side. Neurologic findings on the right side, but not on the left: diminished muscular power in arm and leg; exaggerated biceps reflex; absent brachio-radialis reflex; dig.I–III in flexion; diminished sensitivity with regard to vibration, pin-prick pain and stereognosis.

Case 3

Male, 62 years old. Multiple sclerosis including right-sided hemiparesis since 35 years. Venous insufficiency of right foreleg with ulcer on right lateral malleol for one year. Progressive eczema around the ulcer and extending to the same foreleg during the last month, and exudative eczematous

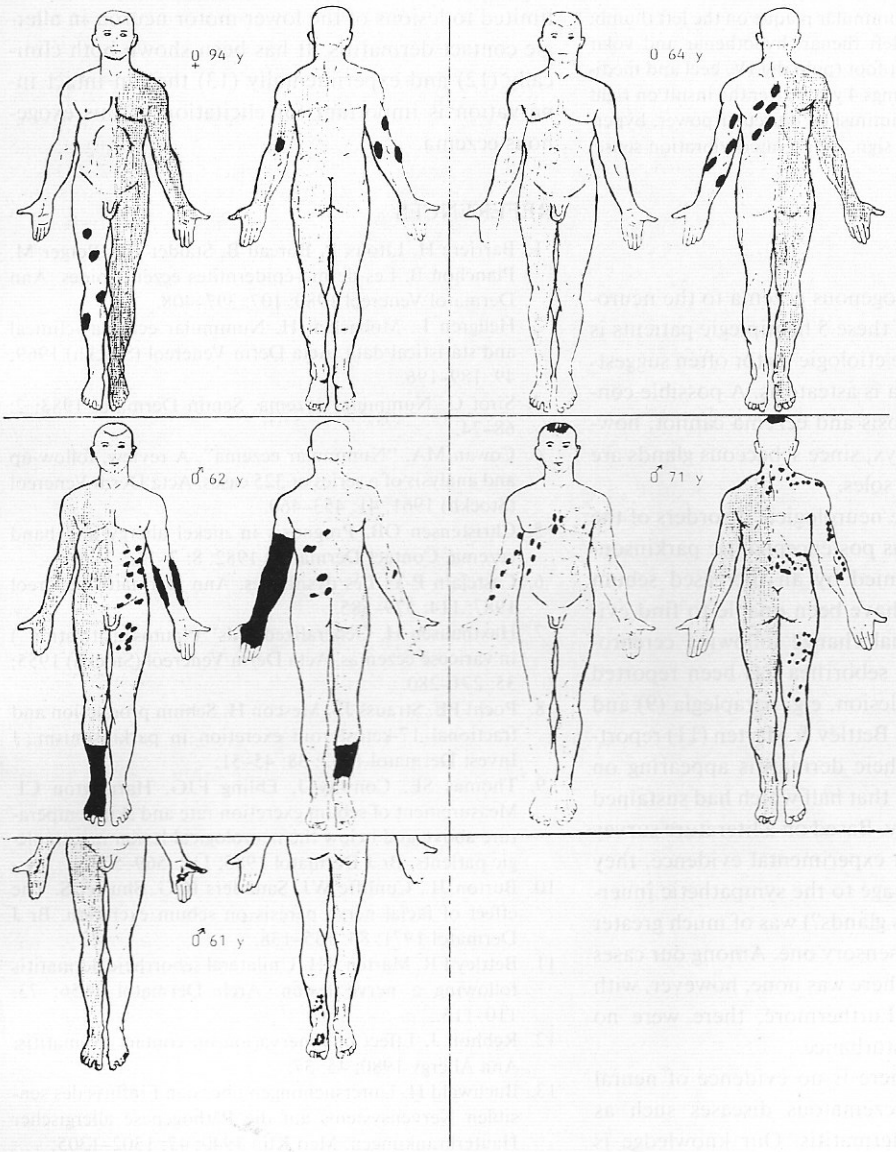

Fig. 1. Distribution of eczema in 5 patients after intracerebral disease followed by hemiparesis.

eruption on the left side of the trunk, left arm and thigh. Patch tests to the standard series and medicaments negative. The eruption was interpreted as an 'allergid' reaction. Neurologic findings on the right side, but not on left: diminished muscular power, diminished sensitivity with regard to vibration. Suspect positive Babinski sign. Absent reflexes in arm and leg.

Case 4

Male, 71 years old. Periodic eczema since youth, with multiple heredity for eczema. Disease located mainly on legs, arms and scalp. PRIST® 200 ku/l. The eczema endogenous, probably atopic. Four years previously, cerebral infarction of right capsula interna (computer tomography) followed by left-sided hemiparesis. Since then periodic eczema of right side of the body, mainly shoulder, mid-trunk, upper arm and thigh. Neurologic findings: on the left (but not the right side), diminished muscular power, slightly diminished sensitivity to pin-prick pain and vibration, hyperreflexia and positive Babinski sign.

Case 5

Male, 61 years old. Cerebrovascular insult resulting in right-sided hemiparesis and speech disturbances. For 3 months before the insult, eczematous patches on right ankle and big toe as well as pompholyx (vesiculosis) of both soles. Six

months after the insult a nummular plaque on the left thumb, spreading a year later to left thenar, hypothenar and volar aspect of dig.III, also to left foot (pulp.dig.IV, heel and medial aspect). Neurologic findings 4 years after the insult on right side, but not on the left: diminished muscular power, hyperreflexia, positive Babinski sign, exaggerated vibration sense, drop foot tendency.

DISCUSSION

The localization of endogenous eczema to the neurologically healthy side of these 5 hemiplegic patients is difficult to explain. One etiologic factor often suggested in nummular eczema is asteatosis. A possible connection between asteatosis and eczema cannot, however, apply to pompholyx, since sebaceous glands are absent from palms and soles.

It is known that some neurological disorders of the primary neuron, such as postencephalitic parkinsonism, is often accompanied by an increased sebum excretion rate (8). We have been unable to find evidence of such functional change following cerebrovascular accidents, but seborrhea has been reported below the neurological lesion, e.g. paraplegia (9) and facial paresis (10). Also, Bettley & Marten (11) reported on a case of seborrheic dermatitis appearing on one side of the face, viz. that half which had sustained a peripheral nerve injury. Based on a literature survey as well as on their own experimental evidence, they concluded that the damage to the sympathetic innervation (to the sebaceous glands?) was of much greater importance than to the sensory one. Among our cases of endogenous eczema there was none, however, with seborrheic dermatitis. Furthermore, there were no signs of sympathetic disturbance.

To our knowledge, there is no evidence of neural monitoring in other eczematous diseases such as pompholyx or atopic dermatitis. Our knowledge is limited to lesions of the lower motor neuron in allergic contact dermatitis. It has been shown both clinically (12) and experimentally (13) that an intact innervation is important for elicitation of this exogenous eczema.

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