

Unilateral Facial Circumscribed Hyperhidrosis

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A case of a 15-year-old male with unilateral facial circumscribed hyperhidrosis is reported. No morphological anomalies of the eccrine sweat glands could be noted. The results obtained with local applications of aluminium hexachloride in 20% alcoholic solution are discussed together with the few previous cases appearing in the literature. *Key words:* *Hemifacial topography*. (Received January 15, 1985.)

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Unilateral circumscribed hyperhidrosis, sometimes idiopathic, is an extremely uncommon finding. The present paper describes a characteristic observation with hemifacial topography.

CASE REPORT

A 15-year-old male without previous pathological antecedents, complained of sweating episodes limited to the right side of his face. These had first appeared spontaneously 18 months previously. During the interim period, the hyperhidrotic episodes became increasingly frequent and intense, reaching daily periodicity. The crises were exacerbated by heat and situations of mental stress.

During exploration it was observed that the hyperhidrosis was not accompanied by hemifacial reddening or by excessive salivation, lacrimation or headaches. The affected zone was absolutely normal in appearance, colour and texture (Fig. 1). Sweating was within normal limits in the rest of the skin. A pilocarpine injection gave an immediate and abundant glandular response on the affected side of the face, but less so on the other. The same result was observed after heat-induced provocation (Fig. 2). Detailed neurological, ocular, bone and complementary studies did not reveal any anomalies.

Two biopsies were performed from the right preauricular area and from healthy skin and no anomalies were detected. The eccrine sweat glands were morphologically normal in both biopsies.

Topical daily application of a 20% alcoholic solution of aluminium hexachloride led to some temporary improvement, but the symptoms relapsed after discontinuation of treatment.

DISCUSSION

The first observations of unilateral circumscribed hyperhidrosis were reported by Tarlov and Herz (11), Tankel (10), Pearce (8), and Shafar (9), and since 1971 by Verbov (12), Cunliffe et al. (2), Bedi and Buthani (1), Dworin and Sober (3), and Hatzis et al. (7).

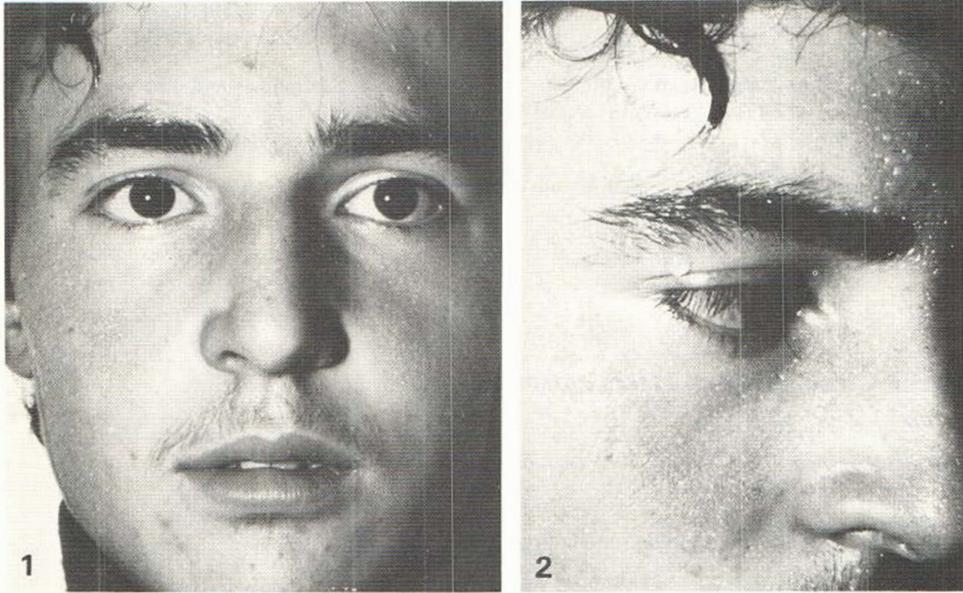


Fig. 1. Unilateral facial hyperhidrosis on the right half of the face.

Fig. 2. Showing increased sweating following heating.

Regardless of whether the process is hemifacial, thoracic or localized to the limbs, in plaque form, segmentary or in zone form, it is undoubtedly a very rare finding. It may be an atypical manifestation of gustatory sweating (2), it may occur as the symptom of a nervous system disease: hypothalamic tumour, syringomyelia, tabes dorsalis. It may be due to a peripheral compressive neuritis (4), or be a result of surgical removal of stellate ganglion (5), or, finally, it may be idiopathic, as in our own case.

In agreement with Lapière (6), we consider the idiopathic form of unilateral circumscribed hyperhidrosis to be a functional nevus eventually resulting in a secondary glandular hypertrophy. The pathogenic mechanisms were described in detail by Hatzis et al. in 1980 (7), but are uncertain. They believe, in summary, that the nervous impulses are delivered from the hypothalamic centres of the thermoregulation, and further that the circumscribed and paroxysmal nature of the hyperhidrosis is due to several and different direct stimuli or to an axon reflex at the peripheral level. The end of the crises would be due to sweat gland fatigue and secondarily to a mechanical obstruction of the sweat ducts by hydration and swelling of stratum corneum during the crises (2).

In localized hyperhidrosis it is possible to give a topical treatment with methenamine, glutaraldehyde and anticholinergic substances. According to the direction of Dworin et al. (3), our patient was treated with a 20% alcoholic solution of aluminium hexachloride which yielded a direct, though temporary response.

REFERENCES

1. Bedi TR, Bhutani LK. Unilateral facial hyperhidrosis. *Dermatologica* 1974; 149: 374.
2. Cunliffe WJ, Johnson CE, Williamson DM. Localized unilateral hyperhidrosis. A clinical and laboratory study. *Br J Dermatol* 1972; 86: 374.
3. Dworin A, Sober AJ. Unilateral segmental hyperhidrosis. Response to 20% aluminium chloride solution and plastic wrap. *Arch Dermatol* 1978; 114: 770.

4. Eliis H. Hyperhidrosis. *Br J Hosp Med* 1972; 7: 641.
5. Goldstein N. Ephidrosis (local hyperhidrosis nevus sudoriferous). *Arch Dermatol* 1967; 96: 67.
6. Lapière SA. A propos d'une observation de naevus sudoripare avec hyperhidrose. *Dermatologica* 1957; 115: 293.
7. Hatzis J, Papaioannou C, Tosca A, Varelzidis A, Capetanakis J. Local hyperhidrosis. *Dermatologica* 1980; 161: 45.
8. Pearce JM. Abnormal facial sweating. *Br J Clin Pract* 1964; 18: 409.
9. Shafar J. The syndromes of the third neurone of the cervical sympathetic system. *Am J Med* 1966; 40: 97.
10. Tankel HI. A case of gustatory sweating. *J Neurol Neurosurg Psychiatry* 1951; 14: 129.
11. Tarlov IM, Hertz E. Unilateral frontal hyperhidrosis relieved by supraorbital nerve section. *J Am Med Ass* 1947; 133: 476.
12. Verbov J. Unilateral localized hyperhidrosis over face and scalp. *Br J Dermatol* 1974; 90: 470.