

"SPONTANEOUS STELLATE PSEUDOSCARS" OF THE ARMS CAUSED BY INCREASED SKIN FRAGILITY

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Abstract. 5% of 200 elderly people had typical "spontaneous stellate pseudoscars" and senile haemorrhages in the atrophic skin of their forearms and backs of the hands. In 2% laxity of the fragile skin resulted in well demarcated superficial ulcerations. Four other cases with the same picture of pronounced skin fragility, clear-cut, typical ulcerations and stellate white scars are described in detail. It seems that the "spontaneous stellate pseudoscars" described by Colomb, in some cases at least, follow ulcerations in skin which is abnormally fragile. These heal with scars which are therefore neither spontaneous nor pseudoscars.

In 1967 Colomb et al. (2) described skin changes which occurred on the arms of elderly people and which did not seem to have been reported before in the literature. White, scarlike, stellate or linear lesions developed in senile atrophic skin were associated with skin haemorrhages of the so-called Bateman type. Zak, Pai & Kanshepolsky (10) later reported a similar case from the USA. Colomb & Lartaud (3) found that these lesions occurred in approximately 20% of 405 elderly people hospitalized in a city area and in 42% of 94 people in a rural area.

The lesions were thought to have developed spontaneously without any previous break in the skin surface. The French authors do not mention that there was any preceding ulceration on the sites where the "pseudoscars" appeared but the American authors reported that in their case, some of the cutaneous ecchymoses were crusted (10). Recently Braun-Falco & Balda (1) reported three new cases. They believe that the white scarlike lesions may result from the healing of traumatic ulcers. Shuster & Scarborough (7) in a paper on senile purpura stated that extensive lateral motility of atrophic skin may lead to rupture of

the skin as well as to bleeding. They also noticed that the ulcerations may heal to form white scars.

The present paper deals with "spontaneous stellate pseudoscars" in a fragile skin where there was a pronounced tendency to superficial ulceration.

MATERIAL AND METHODS

Case 1. A 70-year-old woman with hypertensive heart disease and glaucoma had psoriasis and nodular elastosis of the face (Favre-Racouchot). She was given topical steroids for her psoriasis but these steroid preparations were not applied to her forearms. She had not received systemic steroids. There were no clinical or laboratory signs of porphyria. For 10 years it had been noticed that the skin on the back of her hands and on her forearms was excessively fragile and ulcerated after the slightest trauma. On several occasions the removal of adhesive tape from her forearms had also removed the epidermis, leaving a superficial erosion. It was characteristic that many of the epidermal defects were linear or semilunar and the epidermis was sometimes pushed and wrinkled at one side of the ulceration (Fig. 1). It is our definite impression that they were caused by a shearing strain on the skin. They were seen on areas both with and without senile ecchymoses. The ulcerations seemed to be only moderately painful. There were no indications that the lesions had been self-inflicted.

In the same regions there were many scarlike, whitish lesions which were sharply demarcated, linear, stellate, rounded or irregular in appearance. They were in sharp contrast with the bluish red-brown colour of the rest of the atrophic and hyperpigmented skin, thus giving a very remarkable and characteristic picture (Figs. 2 and 3). The lesions were present for 5 cm proximally on the upper arm and then stopped where there was a sharp border with normal skin. She also had a large number of senile ecchymoses in the atrophic skin. The bleeding stopped abruptly at the border of the white scarlike lesions.

Case 2. A 61-year-old woman with systemic lupus erythematosus had been treated with systemic steroids for

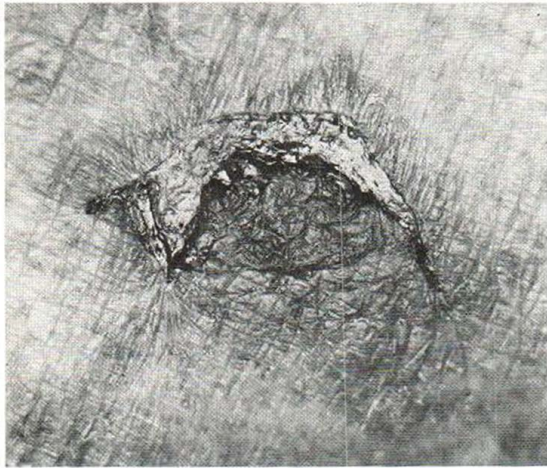


Fig. 1. Superficial ulceration in atrophic, senile skin after slight trauma, later followed by a "spontaneous stellate pseudoscar" (case 1).

a long period and had developed an iatrogenic Cushing syndrome. While in hospital she developed senile-type haemorrhages in the skin of her forearms and the skin became fragile. Superficial, sharply demarcated ulcerations occurred after slight trauma as when the bed was made. Successive white linear or stellate scars developed with the same characteristic appearance as in case 1.

Case 3. A 71-year-old man, with a fracture of the femur and a bleeding gastric ulcer was sent to us "because of haematomas on the arms together with a loosening epidermis". There were pronounced changes on the back of the hands and forearms consisting of atrophic skin, senile ecchymoses and several sharply demarcated superficial ulcerations together with white linear and stellate scars.

Case 4. A 50-year-old woman with psoriasis had noticed fragility of the skin of her arms with ulcers following

mild traumas. She developed ecchymoses on her forearms and superficial ulcerations with the characteristic well-demarcated borders and stellate or linear scars. There was no diffuse atrophy of the skin. One of the scarred lesions was biopsied and it was observed that the tissue felt sclerotic. She had been on topical but not systemic steroids because of her skin disease.

Incidence study

In order to study the incidence of the lesions described, 200 elderly people were studied. The group consisted of 56 men and 144 women, all over 60 years of age (190 (95%) more than 70 years old). They were examined for the presence of skin lesions on their forearms and hands. Most belonged to an urban area and lived in a home for elderly people.

RESULTS

Histologically (cases 1 and 2) the atrophic skin on the forearms and back of the hands showed senile elastosis. Corresponding to the scarlike lesions, under the thin epidermis lacking of rete ridges, most of the corium was occupied by a dense collagen-rich connective tissue-block with a few fibrocytes. The block did not take the stains for elastic fibres. Below the block abundant elastic staining fibres occurred which were partly curly, fragmented and clumped. In a biopsy taken from the border between a cutaneous bleeding and a white scarlike lesion the bleeding was microscopically seen to stop at the border of the connective tissue block (Fig. 4). The block seemed to stop the progression of the bleeding, an observation in concordance with the clinical observation that the bleeding did not involve the scar-areas.



Fig. 2. "Stellate" scars and senile bleedings in atrophic skin (case 1).

DISCUSSION

We have thus been able to confirm the recent observations by Colomb et al. on the frequent occurrence of the so-called spontaneous stellate pseudoscars (2, 3). In a series of 200 patients over 70 years of age 5% had these skin lesions. In agreement with these authors we found that the clinical picture is very characteristic, thus making the diagnosis easy. It clearly differs from that of idiopathic guttate hypomelanosis (4, 9).

With the words "spontaneous" and "pseudoscars" the French authors indicated that the lesions developed without any preceding break in the skin surface. Our observations on superficial ulcerations in 4 cases, described in detail, and in 4 of 200 elderly people examined routinely, are in favour of an increased skin fragility being the primary event. The superficial, clear-cut ulcerations develop after even slight trauma and are followed by the characteristic, stellate or linear, white lesions. Shuster & Scarborough (7) as well as Braun-Falco (1) also express the opinion that the scars follow traumatic ulcerations. In some of our patients, however, we could not exclude the possibility that scars developed without any preceding ulceration, thus being spontaneous.

As to the etiology of this entity it seems that senile elastosis (6) may be the underlying cause, the greatest provoking factor being sunlight. This was also stressed by the earlier investigators (2, 3, 8, 10). The case described by Zak et al. (10)

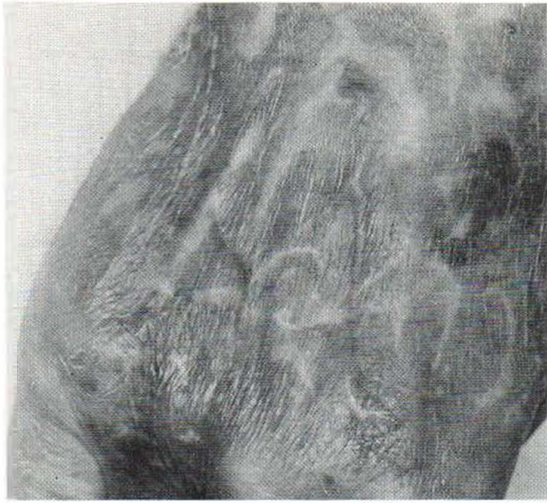


Fig. 3. Detail of Fig. 2.

Incidence. One man and 9 women (5%), had pronounced "stellate pseudoscars" with the typical picture described by Colomb. These figures are the minimal incidence as only those persons with pronounced changes were included and those with solitary pseudoscars were excluded. In 4 of the 10 patients there was an associated laxity of the skin on the arms with superficial ulcerations both with and without haemorrhagic crusts. They themselves considered they had a fragile skin and said that bleeding and erosions developed easily after even slight injury.



Fig. 4. Microscopic picture of "spontaneous stellate pseudoscar". → indicates the border of the connective tissue block to which the bleeding extends (case 1).

was that of a chauffeur and the lesions developed especially on the arm, which was exposed to the sunlight. In our cases the distribution of the lesions corresponded to the sun-exposed parts of the forearms and the border with the covered normal skin on the upper arm was quite distinct. In one patient the same atrophic and hyperpigmentated skin as was present on the arms was also observed on the sun-exposed parts of the neck but there was no scarring. The histology of the atrophic skin on the arms beneath the whitish scarlike lesions showed marked changes, corresponding to that of actinic (senile) elastosis. The coincidence of the stellate scars and the Favre-Racouchot syndrome (nodular elastosis with cysts and comedones) in case 1 may be noticed. The latter is considered to be provoked by considerable actinic exposure in predisposed individuals (5).

It is possible that topical or systemic corticosteroids may play an additive role in some cases. Of our 14 patients with stellate scars on the arms 1 was on systemic and 2 on topical steroids.

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