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LINEAR TELANGIECTASIA

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Abstract. Two female patients with linear telangiectasia are reported. In both instances the lesions appeared later in life and were not associated with any other systemic or cutaneous disorder. In case 1, the appearance of telangeictasia was preceded by pregnancy and in case 2 the lesions followed injection of an estrogen-progesterone compound. It is assumed that a congenital predisposition of the affected vessel walls may have been present, and that the lesions became manifest later in life as the result of the hormonal changes.

In 1918, Mühlberg (6) described essential telangiectasia as a state in which cutaneous capillaries or veins undergo progressive dilation independent of preceding or coexistent skin lesions (inflammation, scar, ulcer, etc.). Since then many reports of essential telangiectasia, predominantly in women, have appeared in the world literature (2,5). We have recently seen 2 patients with a linear telangiectatic process which developed in conjunction with pregnancy and estrogen-progesterone therapy which we feel would be of interest to report.

REPORT OF CASES

Case 1.

A 28-year-old white woman, 24 weeks pregnant, was well except for an asymptomatic macular eruption on the right side of the chest, arm, and forearm. This was the second time during which she had lesions which had appeared early and increased in number during the course of her pregnancies.

During her first pregnancy, 2 years earlier, numerous similar telangiectatic spots had developed, but they faded after the birth of her child. She had also had an episode of epistaxis at that time.

There was no telangiectasia or abnormal bleeding in her family. Her mother has high blood pressure and one sister had rheumatic fever.

Physical examination showed multiple, reddish, punctate, discrete macular lesions on the right upper chest, neck, shoulder, arm and forearm distributed in a linear fashion. On close inspection the lesions were composed of fine telangiectatic vessels which blanched on pressure. Some of the telangiectatic spots had a pale halo. On the left arm and nose a few large spider nevi were visible. Her physical examination was normal in all other respects.

Laboratory findings. VDRL nonreactive; hematocrit 47%; hemoglobin 15.4 gm; 2 hours post-prandial blood glucose 100 mg%; white blood count 8200 with a normal differential. Radiographic examination of the chest: normal. Histologic examination of a section taken from a punch biopsy of a lesion on the right forearm showed dilated dermal capillaries some of which were filled with erythrocytes (Fig. 1).

Followup examination 14 months later showed a few remaining faint telangiectatic macules on the right shoulder and arm. The process had markedly resolved.

Case 2.

The second patient was a 25-year-old white woman with a 4–5 year history of reddish asymptomatic macular lesions on areas of the right anterior chest, right shoulder and right upper arm.

The patient had had the usual childhood diseases, tonsillectomy at age 5, bonchial asthma from age 4 to 11 years, acne vulgaris since age 13, and infectious mononucleosis and hepatitis in 1965. She had received estrogen-progesterone compounds intramuscularly for menstrual disturbances prior to the appearance of the skin lesions.

The general physical examination was normal. The skin of the right upper chest, right shoulder and right upper arm showed grouped macular telangiectatic lesions with a linear pattern (Fig. 2). On close inspection these lesions consisted of fine ectatic capillaries which blanched on pressure. As in case 1, many of the telangiectatic macules were surrounded by a pale halo.

Laboratory data. Hematocrit 41%; hemoglobin 14,3; white blood count 5600 with a normal differential; VDRL nonreactive; cholesterol 181 mg%; thymol turbidity 3.1; cephalin flocculation negative; protein-bound iodine 5.2 mg/100 ml; Pap smear normal; radiographic examination of the chest was normal. Skin biopsy was not done.

COMMENT

Telangiectasia, a permanent dilatation of the smaller blood vessels of the skin or mucous

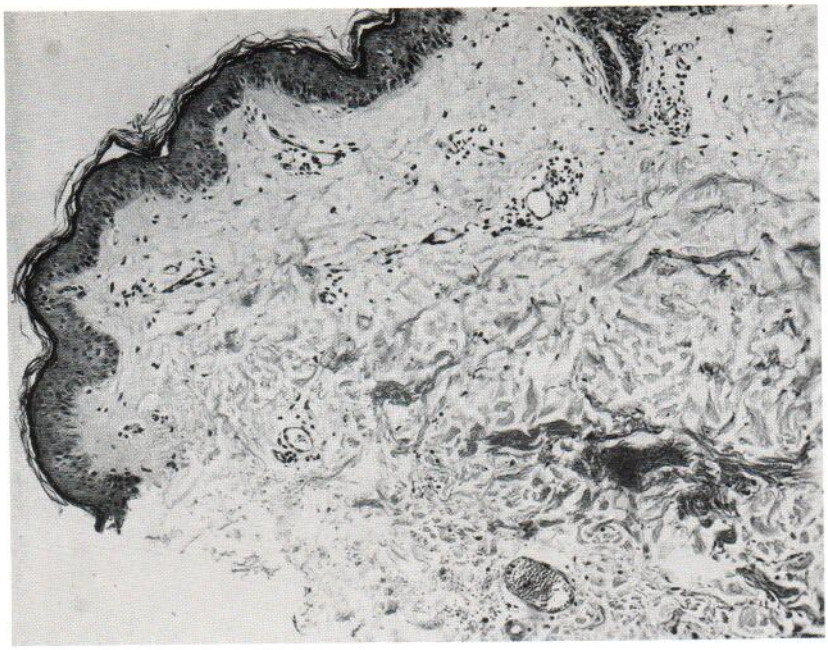

Fig. 1. Biopsy of a lesion on the right forearm shows a normal epidermis and a number of moderately dilated capillaries in the dermis. A mild nonspecific perivascular infiltration is also present (case 1).

membranes, may be caused by diverse processes. Clinically it manifests itself as small red, punctate, stellate or linear markings. As Parkes Weber (7) pointed out, they may coalesce to give a linear appearance to the process. The clinical pattern and appearance of telangiectasia may provide useful information for the diagnosis of an underlying process. Light microscopy, electron microscopy and histochemical demonstration of alkaline phosphatase activity in the capillary walls has provided more information. McGrae & Winkelmann (5) showed that alkaline phosphatase activity was present in the telangiectatic vessels of dermatomyositis and in the normal capillary walls, but no such activity was found in vessel walls in essential telangiectasia. These authors proposed the availability of this histochemical method for differentiating essential telangiectasia from the symptomatic variety.

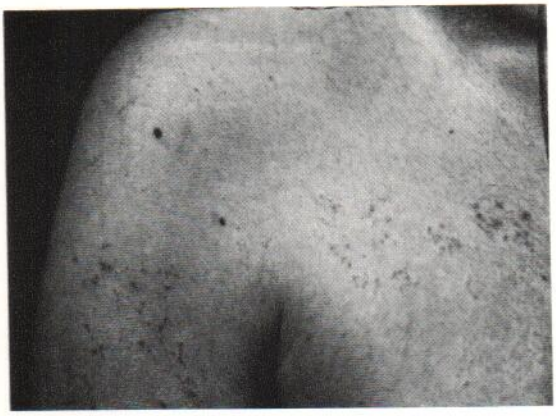

Fig. 2. Shows telangiectatic lesions on the right upper arm and chest, anterior aspect (case 2).

Telangiectasia may be said to be of two types: congenital and acquired. Examples of the congenital and hereditary types of telangiectasia and vascular anomalies are: hereditary hemorrhagic telangiectasia (Osler's disease), ataxia telangiectasia, nevus flammeus, Maffuci's syndrome, and blue rubber bleb nevi (1). Acquired telangiectasia may be: (*a*) secondary to systemic diseases and vascular disturbances such as systemic lupus erythematosus, dermatoyositis, systemic sclerosis, syphilis and mastocytosis; (*b*) a feature of other dermatoses such as acne rosacea, radiation dermatitis, poikiloderma, morphea, lupus vulgaris, basal cell carcinoma and necrobiosis lipoidica diabeticorum, and (*c*) the essential or idiopathic type. Hepatic cirrhosis and pregnancy may result in spider telangiectasia secondary to estrogenism but they are usually characteristic and not linearly distributed.

In essential telangiectasia the cutaneous capillaries or veins show progressive dilatation independent of any associated skin changes (6). The

etiology of essential telangiectasia is not known. In the past, mechanical (disturbance of general circulation), infectious (syphilis), toxic (hepatic, renal, etc.) and neurogenous (paralysis of motor nerves) theories have been advanced (3). The dermatosis which is absent at birth appears most commonly during the second or third decade. Females are affected more than males.

As laboratory methodology has improved many cases first classified as idiopathic have been found to belong to the hereditary or secondarily acquired groups (2). The 2 patients reported here (as well as another similar case seen by Dr Frederick Malkinson) (4) may represent a special type of benign, isolated telangiectasia which formerly could be considered as "essential", but is possibly related to the effects of pregnancy or sexual hormonal influences on a subclinical congenital hemangioma. The discrete, macular telangiectatic lesions in both patients were unilateral, asymptomatic and had a linear pattern. They were absent at birth, their clinical appearance was gradual and general health was not affected. Subjective symptoms such as tingling, numbness or burning sensations were absent.

Microscopic studies disclosed a normal epidermis with abnormal changes limited to the upper portion of the dermis. Small to moderate numbers of dilated vessels were observed, some of which contained red blood cells. There was no sign of inflammation, but there was a slight cellular infiltration consisting of lymphocytes and fibroblasts around the ectatic vessels.

In case 1 the lesions increased in number and size during her two pregnancies and regressed after each delivery. In case 2 the appearance of telangiectases was preceded by the injection of an estrogen–progesterone compound. Despite the fact that the lesions appeared in the second or third decade of life, it may be that a congenital predisposition and abnormality of the vessel walls in the affected areas had existed at the time of birth and the ectatic changes became clinically manifest later in life due to a hormonal influence. The conclusions drawn are admittedly weak as are any post-hoc-ergo-propter-hoc conclusions. But the findings are of sufficient interest to have attention drawn to them.

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