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Malignant Skin Lesions on the Legs and Feet at a Dermatological Leg Ulcer Clinic during Five Years

Sir,

In clinical practice leg and foot ulcers are a common problem, with an increasing frequency in the elderly, as well as the number of skin cancers. It is important to have malignancies in mind both initially when the patient seeks help for a leg ulcer and also if the ulcer does not heal as anticipated. If a correct diagnosis is established at an early stage, the skin malignancy can be cured and spread stopped. The malignancy may be a primary skin cancer or a secondary malignant degeneration in a chronic skin lesion or ulcer (Marjolin's ulcer) (1).

The aim of the present study was to estimate the occurrence of malignancies on the lower limbs and feet in the setting of a leg ulcer clinic and to see if there were any signs or demographic data that distinguished the malignant lesions from leg ulcers.

MATERIAL AND METHODS

Retrospectively from outpatients attending the leg ulcer clinic of the Dermatology Division of Sahlgrenska University Hospital, Göteborg, during a 5-year period (1991–1995) patients with biopsy-verified malignancy of the leg or foot were selected to be studied.

The following data were recorded at the time of biopsy verification: diagnosis, sex and age of the patients, size and type of skin changes (ulcerated or not), duration from the start of the lesion to diagnosis, and location. The number of patients that visited the clinic for non-malignant leg ulcers was registered.

Statistics

Values are given as mean, median and range (min-max) for different age groups. When comparing the age groups for malignant lesions and leg ulcers, the chi-square test with Yates (continuity) correction was used.

RESULTS

Six hundred and eighty-five patients (66% women, 449/685) had non-malignant types of leg ulcers and a mean age of 73 (median 75), range 17–99 years. The 20 patients (70% women, 14/20) with malignant lesions on their legs or feet had a mean age of 80 (median 80), range 58–92 years. Seventeen of these patients (71% women, 12/17) with a mean age of 82 (median 85), range 58–92 years, had basal and/or squamous cell carcinomas and these patients were significantly older than the patients with non-malignant leg ulcers ($p < 0.00001$).

There were more women than men among the patients with malignancies (ratio 2.3 : 1) than in the group of patients with non-malignant leg ulcers (1.9 : 1) (n.s.).

Malignant skin lesions were found in 3% (20 patients out of 705) of all patients at an ulcer clinic during 5 years. Three patients had less common types of malignancies. One patient had a cutaneous T-cell lymphoma, one patient a non-HIV-related Kaposi's sarcoma and one patient a malignant melanoma on the leg.

The most common type of malignancy was basal cell carcinoma, found in 60% of the patients (12/20). Fifteen per cent (3/20) of the patients had squamous cell carcinomas, 5% (1/20) had a baso-squamous carcinoma and 5% (1/20) a carcinoma in situ. There were 29 malignant lesions in the 17 patients with the basal and squamous cell carcinomas. Treatment was mostly excision and grafting. The duration before diagnosis varied from 2 months to 3 years.

The site of the malignant lesions on the legs and feet had a large variation, but 67% (8/12) of the basal cell carcinomas were found on the anterior aspect of the leg.

In half of the cases (10/20) the skin lesions were ulcerated.

Four patients had simultaneously malignant lesions and non-malignant leg ulcers.

DISCUSSION

Primary or *de novo* malignant skin lesions in the lower limbs were claimed to be a very rare condition by Black in 1952 (2). Even rarer is a malignant transformation, a secondary malignancy, also called a Marjolin's ulcer, in chronic venous ulceration (3). Transformation takes long, often 20–30 years, but at least 2–3 years (4). None of the malignant ulcers in this study was considered to be a secondary malignancy, since they had a relatively short duration, and there was no history of previous

radiation, vaccination or other known risk factors. It is, however, often difficult to decide if a malignancy is primary or secondary.

In a recent study, squamous cell carcinoma was found in 0.16% of venous leg ulcers (17 out of 10,913 cases) (5). Basal cell carcinomatous transformation seems to be at least as common (6). Basal cell carcinomas are mostly found on sun-exposed areas of the skin, less frequently in the lower extremities (7). In the present study, basal cell carcinoma was the most common skin malignancy on the legs and feet, which is in accordance with other studies (6, 8–11).

Skin malignancies may easily be mistaken for other diseases. The leg ulcer diagnosis may also be difficult, which we found in a previous study (12). Questionnaires were sent to randomly selected persons 65 years of age and older, and more than half considered themselves having leg ulcers. When they were examined they did not have leg ulcers but skin diseases like eczema and psoriasis, and 7% had non-ulcerated basal cell carcinomas on the legs (12). Not only for the patient but even for the physician ulcerated cancers on the legs and feet may be difficult to differentiate from leg ulcers, especially considering that malignant skin lesions and non-malignant ulcers are occasionally found in the same patient simultaneously, as in 20% (4/20) of the patients in this study. The clinical signs are not always sufficient for diagnosing between a leg ulcer and a malignant ulcer, and to follow the healing is important. Biopsies can be taken when a malignancy is suspected on clinical grounds or if a venous ulcer does not start to heal with standard therapy. Some recommend a biopsy of all ulcers at the first visit (13), others when the ulcer does not start to heal in 3 (6) to 4 months (14), and yet others on clinical suspicion only (5).

Basal cell carcinomas are often multifocal and a small biopsy can miss the malignant part. Repeated biopsies are sometimes necessary if the clinical suspicion remains (3, 14).

The frequency of squamous cell carcinoma on the lower limbs increases exponentially with age, approximately doubling in 8 years (15). In the present study, the patients with basal and/or squamous cell carcinomas (mean age 82 years) were older than the patients with leg ulcers (mean age 73 years) ($p < 0.0001$).

The conclusion from this study is that most (60%) of the 3% of skin malignancies seen in the leg ulcer clinic are basal cell carcinomas, mainly found on the anterior aspect of the leg, which is in concordance with another study (16). Leg ulcers are seldom found at this site. Patients with malignant lesions were found to be even older than the group of patients with leg ulcers. Thus, since there are few clinical and demographic signs to differentiate between ulcerated malignancies and leg ulcers, the level of suspicion of malignancies should be high, and a liberal attitude to the taking of biopsies is therefore recommended.

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