

## Telangiectasia and Gingival Hyperplasia as Side-effects of Amlodipine (Norvasc) in a 3-year-old Girl

Sir,

Side-effects of drugs are often thought to be the cause of certain skin manifestations, especially in cases of clear time-relationships. We describe here a patient in whom side-effects of antihypertensive drugs were suspected, but since the specific combination of telangiectasia of the cheeks and gingival hyperplasia had not been described previously some delay occurred before it was clear that the calcium antagonist amlodipine was responsible.

### CASE REPORT

A 3-year-old girl was referred to the Department of Dermatology by a paediatrician because of telangiectasia and hyperplasia of the gingiva. At the age of 6 months she had suffered from haemolytic uraemic syndrome (HUS). A year and a half later, she had another period of HUS with development of a nephrotic syndrome and hypertension. After this recurrence, renal function was stable and in order to treat hypertension she was given furosemide (once daily 10 mg), amlodipine (twice daily 5 mg) and captopril (thrice daily 5 mg).

Since the patient had been using this medication, she had symptoms of telangiectasia on the cheeks and hyperplasia of the gingiva. There were no subjective complaints. Symptoms were progressive. There was no photosensitivity, and no systemic or topical corticosteroids had been used.

Physical investigations showed a vivacious girl with areas of telangiectasia symmetrically on both cheeks (Fig. 1). The gingiva showed hyperplasia without signs of inflammation (Fig. 1). No other symptoms were present.

Because of the evident time-relationship, it was feasible that one of the medicaments might be responsible for the dermatological symptoms. Indeed, at discontinuation of amlodipine, the skin lesions disappeared completely and gingival hyperplasia diminished considerably (Fig. 2).

### DISCUSSION

Telangiectasia and gingival hyperplasia are both problems that a dermatologist might be consulted for. The specific combina-

tion of symptoms has not been reported previously. Because of the time-relationship between the start of the medication and the appearance of the lesions, a causal relationship is likely.

Captopril is known to have a long list of cutaneous side-effects. However, nothing has been mentioned about telangiectasia or gingival hyperplasia. Furosemide is also known to have many cutaneous side-effects but, since this medication is prescribed frequently, it is not thought that this drug accounts for the side-effects mentioned above.

Amlodipine has been reported to cause flushing; interestingly a few publications also mention telangiectasia in the face (1, 2). Photosensitivity has been described in patients treated with calcium antagonists (3). Amlodipine and other calcium-antagonists like nifedipine (4) are sensitive for photolysis *in vitro*. In the cases described so far, telangiectasia evidently shows photo-distribution, suggesting light as a causal factor. Nevertheless, in our patient, subjectively, no photosensitivity was present. It is hypothesized that specific wavelengths generate photoproducts that in some way result in telangiectasia. Others state that chronic vasodilatation might be responsible for telangiectasia (5).

Gingival hyperplasia is a better known side-effect of calcium channel blockers (6). Besides phenytoin and cyclosporin, calcium channel blockers are also known to contribute to gingival hyperplasia. Most reports in the literature concern nifedipine (7). More recent literature also describes this effect in amlodipine, although the incidence seems less than in nifedipine. It is not clear which mechanisms are responsible for gingival hyperplasia, although it is stated that sequestration of amlodipine in the gingival crevicular fluid appears to be linked with gingival overgrowth (8).

At first, it was not clear what caused the symptoms in our patient, because no report existed describing the specific combination of gingival hyperplasia and telangiectasia in a single patient, although these side-effects had been described separately. Various figures, ranging from 10% to more than 50% of the patients taking nifedipine, have been reported about



Fig. 1. Outspoken telangiectasia and gingival hyperplasia in 3-year-old girl.



Fig. 2. Clearing of the lesions after discontinuation of amlodipine.

incidence of gingival hyperplasia. These figures are assumed to be less in patients taking amlodipine (9). Literature about telangiectasia only consists of a few case reports.

For both symptoms it is likely that they are not always recognized as side-effects and are therefore under-reported. One can imagine that in the group of patients taking antihypertensive drugs, namely adults, telangiectasia is seen more often but not always related to medication and mistakenly diagnosed as a skin disease, such as rosacea. Hopefully, knowledge of the side-effects leads to faster recognition and better patient care.

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## Skin Calcinosis Following Allogenic Bone Marrow Transplantation in an Acute Lymphoblastic Leukaemia Patient

*Sir,*

Skin calcinosis is a condition in which calcium salts are deposited in the skin. Such a deposition may be primary, without any known previous skin abnormality, or secondary to disturbances in calcium and phosphorus metabolism, which usually present with widespread metastatic calcification involving the blood vessels, kidneys, lungs and gastric mucosa.

The most common form of skin calcification is the dystrophic type, which occurs secondary to trauma or to pre-existing skin pathology. Iatrogenic calcification of the skin may also be seen following intravenous administration of calcium salts or after prolonged skin contact with saturated calcium chloride electrode paste (1). To date, bone marrow transplantation (BMT) has not been associated with skin calcinosis.

We report here a case of skin calcinosis following allogenic BMT.

#### CASE REPORT

A previously healthy 22-year-old Arab woman was treated for acute T-cell lymphoblastic leukemia.

She presented in June 1994 with weakness, arthralgia, weight loss, night sweats and fever. Physical examination and imaging at presentation revealed hepato-splenomegaly, para-aortic lymph nodes enlargement, large mediastinal mass and pleural and pericardial effusions.

Skin examination was normal. The peripheral white blood cell count was  $90 \times 10^9/l$  with 58% lymphoblasts. Morphological, cytochemical

and flow cytometric analysis of bone marrow aspirate revealed acute lymphoblastic leukemia (L1). The serum lactic dehydrogenase level was 3136 U/ml.

Combination chemotherapy was instituted according to the Berlin protocol (2) and a complete remission was induced after 4 months. Complications of chemotherapy included severe sinusitis. One year later, a T-cell depleted (CAMPATH – 1G McAb) ( $3.9 \times 10^8$  nuclear cells/kg) allogenic BMT from the patient's fully-matched sister was performed after conditioning with total body irradiation (1200 cGy), cyclophosphamide (60 mg/kg), etoposide (1500/m<sup>2</sup>) melphalan (60 mg/kg) and total lymph node irradiation (720 cGy). Granulocyte col-



*Fig. 1. Skin-coloured stone hard plaques on the patient's neck.*