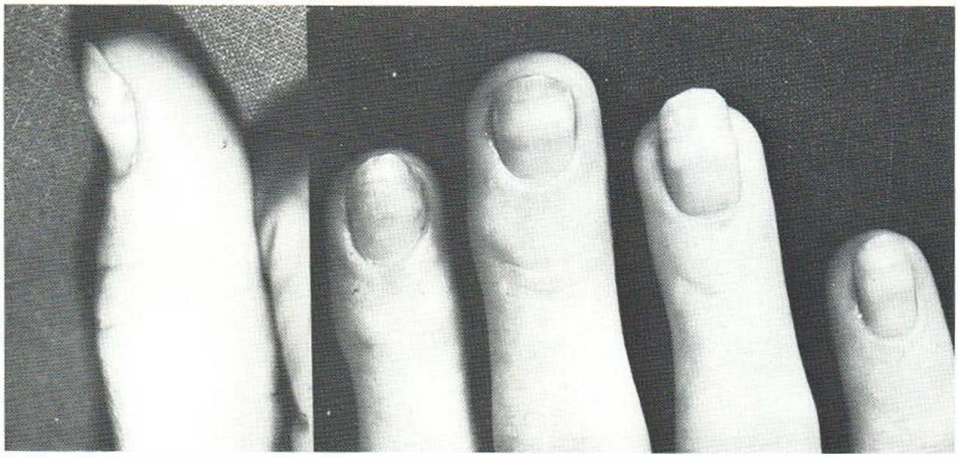

Fig. 1. Nails of the right hand 6 months after stopping penicillamine.

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Photo-onycholysis Due to Tetracycline-hydrochloride

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Ibsen H H, Lasthein Andersen B. Photo-onycholysis due to tetracycline-hydrochloride. Acta Derm Venereol (Stockh) 1983; 63: 555–557.

A case of monosymptomatic photo-onycholysis due to tetracycline-hydrochloride is reported. A 40-year-old woman with rosacea had been treated with tetracycline-hydrochloride (Achromycin®) 250 mg daily for 3 years. In the summer period after one month of intensive sun exposure she developed painful bullae under the nails. *Key words: Photo-onycholysis; Tetracycline-hydrochloride; Phototoxic reaction.* (Received February 28, 1983.)

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The tetracycline group of antibiotics are well-known photosensitizers. In 1961 Orentreich et al. (8) reported photo-onycholysis in 7 out of 28 patients, who simultaneously suffered from a photosensitivity reaction following ingestion of demethylchlortetracycline. In 1970 Frank et al. (3) described similar symptoms in patients treated with tetracycline-hydrochloride and doxycycline. Apart from onycholysis these patients suffered from cutaneous

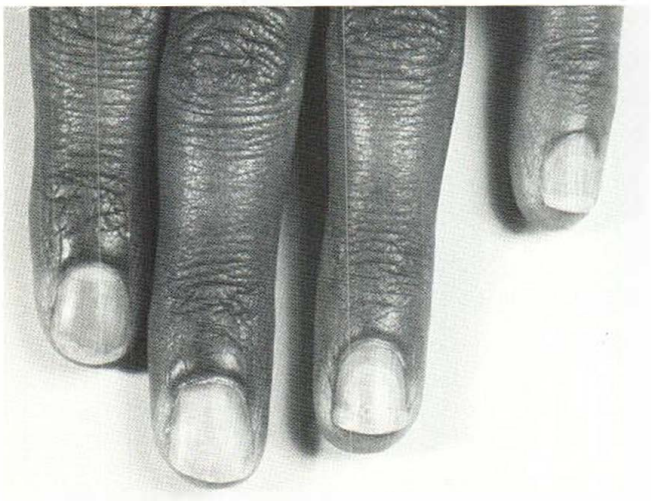

Fig. 1. Onycholysis and bullae under the nails at the first visit.

photosensitivity. However, monosymptomatic onycholysis induced by tetracycline has also been reported (1, 4, 5).

CASE REPORT

The patient is a 40-year-old woman with protracted rosacea treated with tetracycline-hydrochloride (Achromycin®) 250 mg daily during 3 years.

In the summer of 1982 after one month of intensive sun bathing she developed very painful bullae under the nails. The pain was relieved by pressing out serous fluid. All finger nails and six toe nails were affected (Fig. 1). The onycholysis started centrally in the nail beds, the roseate nail. The patient was deeply tanned and apart from rosacea her skin was normal and showed no signs of photodermatitis. Bacteriological and mycological culture of serous fluid from beneath the nailplates revealed only micrococci and no fungi were found. The pain abated spontaneously during 6 weeks. The nails normalized gradually during a few months. The tetracycline treatment was reintroduced 2 months after the initial visit because of exacerbation of rosacea. The patient was warned against intensive sun exposure, and the nails were still normal when observed in the autumn and winter.

DISCUSSION

Phototoxic reactions have been demonstrated in tetracycline-treated mice (7) and in the same manner photo-onycholysis is claimed to be a phototoxic reaction (2, 8). This might be due partly to absorption of UV-light, which has been found in tetracyclines (demethylchlortetracycline) in vitro (9). The selective photosensitivity in the nail bed may be due to special anatomical conditions. Thus, Lewis & Montgomery (6), when investigating the senile nail, found greater elastic tissue degeneration under the roseate nailbed than in the paronychium. They claimed that the nailplate offers only poor protection to the nailbed from exposure to sunlight and may perhaps even concentrate the sun-rays. This, and the fact that our patient was well tanned and thus protected against the sun-rays, might explain why she only developed bullae in the roseate, unpigmented nailbed, but no other skin changes.

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