to Mr. L. Rawlings for his technical help ; and to Miss E. Saunders for the thin-layer chromatograms.

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Artifact Ulcers and Bone Lesions Produced by Elastic Bands

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[WITH SPECIAL PLATE]

Brit. med. J., 1967, **2**, 218–219

It must be uncommon for ulcers to follow the deliberate use of an elastic band, but for the band to have been lost and recovered at operation must be rare indeed. An extensive search of the literature has revealed no such case, so the two described should be of interest.

Case 1

The patient was a married woman aged 69. The family and the past history were positive for varicose veins, and she developed a white leg (left) in 1922 after pregnancy. It was not until 1947 that she produced some ulcers. She was first seen as an outpatient in 1954, when a diagram of irregular-shaped ulcers was made. She defaulted after being told by one of us (R. H. S.) that she would get better only if she would leave them alone. In 1962 a band of ulcers developed fairly suddenly on the lower part of the left leg, and a consultation was sought because of the severity of her pain. During this examination she was asked if an elastic band had been put round the leg, but she resented the question and changed the subject, mentioning the chronic invalidism of her husband and her own inability to work because of the ulcer.

She was subsequently admitted to hospital with three linear ulcers measuring ½ in (0.8 cm.) wide and about 1 in. (2.5 cm.) long, placed horizontally round the distal third of the lower part of the left leg. There was pigmentation of the surrounding skin, which was also oedematous, indurated, eczematous, and slightly moist. Secondary eczematous spread was observed on the thighs, forearms, and, to a lesser extent, on the back.

Healing was uneventful, but she still complained of excessive pain on walking, so an *x*-ray examination was arranged, and the opinion of an orthopaedic surgeon (I. D. K.) requested. When seen by him all the ulcers had healed, but the skin over most of the lower third of the leg was of poor quality, thin, and shiny. The foot was oedematous. During the examination it was noted that a very shallow depression in the skin encircled the leg through the healed ulcer area. This was difficult to see, and then only when the light threw a shadow upon it. The groove coincided with the level of the peculiar radiological changes (Special Plate, Figs. 1 and 2). When these were studied it was noted that the depression in and the new bone formation on the tibia and fibula involved certain surfaces only, and these corresponded to the surfaces which would be in contact with an encircling band, like a belt round two pulleys.

In spite of the patient's protests that no encircling band could possibly be present it was decided to explore. This was done through a postero-lateral approach through the only area of reasonably sound skin. The fibula was exposed and no foreign material was found, but as the bone was thick and rough some was chiselled away, disclosing an elastic band. This was divided and removed without difficulty. Healing of the wound was uneventful, and the patient was discharged from hospital.

Within 10 days a triangular-shaped ulcer had developed just below the original site with scarring, suggestive of a phenol type of burn. On her readmission marked dressings were always altered and coloured ointments removed. The area was then occluded, but further artifact lesions appeared at the edge of the dressing, and when this was extended she attacked her wedding-ring finger with a tight elastic band hidden under the ring. Her attitude was always one of amazement, but the innuendoes showed the underlying resentment. She still has her ulcers.

Case 2

The patient, a man aged 51, presented first in 1948 with an ulcer almost encircling the lower third of his right leg. He was a mild diabetic, in poor circumstances, and very dirty. It was thought then that the ulcer had been aggravated to gain admission to hospital, where it healed spontaneously in a month. He was next seen in 1958, again with an ulcer of his right leg, which this time completely encircled the limb just above the ankle. The leg had been much constricted but the circulation was good. In 1960 a loop of rubber appeared in the ulcer. It was divided, one end pulled upon, and a rubber band removed. A week later another band was removed under similar circumstances, and yet a third and final one was similarly dealt with at the end of another week. After this the ulcer healed completely in a few weeks, and has remained so. *X*-ray films of this case (Special Plate, Figs. 3 and 4) show clearly the grooves in the bone caused by the three bands.

Comment

Patients with self-inflicted lesions usually hope to gain something from their presence, deny any knowledge of their origin, and cannot be tricked into admission. It is thought that the motivation behind this may well be subconscious. Briefly it may be stated that the lesions are bizarre-shaped and their site is important, as usually the injury is inflicted with the right hand (in right-handed individuals) and so must be within its reach. The appearance of fresh lesions above an occlusive dressing is diagnostic. In Case 1 it transpired that the patient avoided keeping summer visitors, which she resented, by means of the ulcers. Chronicity here is probably due to the very long

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IAN D. KITCHIN *ET AL.*: ARTIFACT ULCERS AND BONE LESIONS PRODUCED BY ELASTIC BANDS

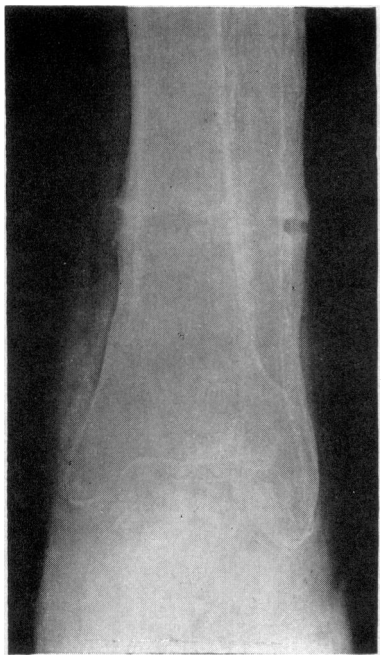

FIG. 1

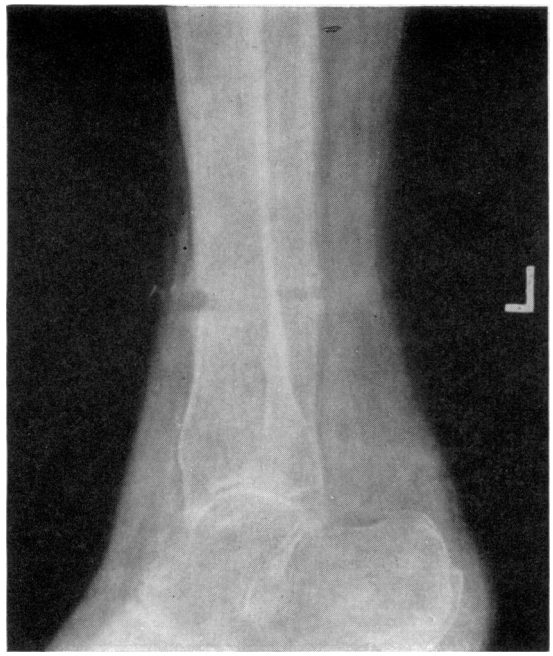

FIG. 2

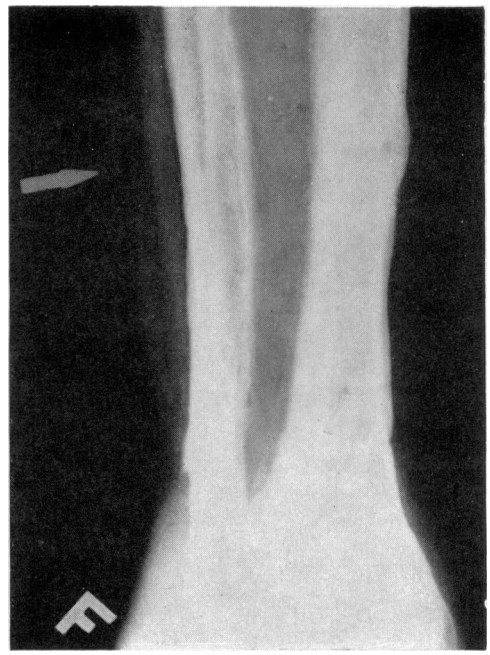

FIG. 4

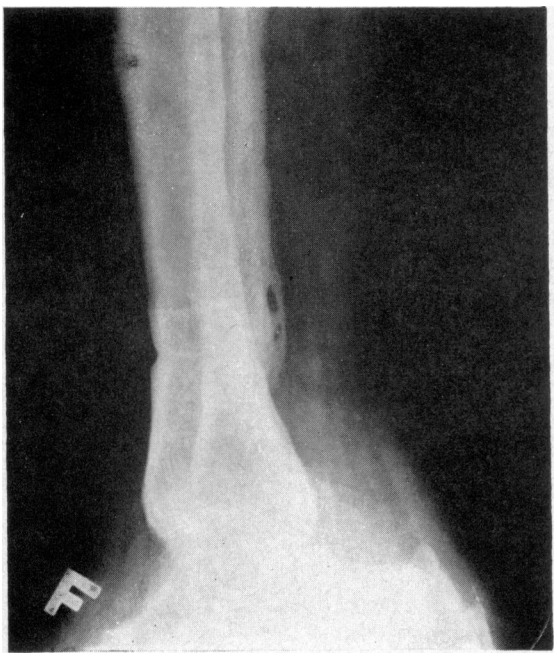

FIG. 3

FIGS. 1 and 2.—Case 1, showing erosion of tibia and fibula by an elastic band.

FIGS. 3 and 4.—Case 2. In Fig. 3 the effect of three elastic bands can be seen; the arrow indicates the more obvious one in FIG. 4.

R. B. W. SMITH *ET AL.*: BEHÇET'S DISEASE WITH RETINAL VASCULAR LESIONS

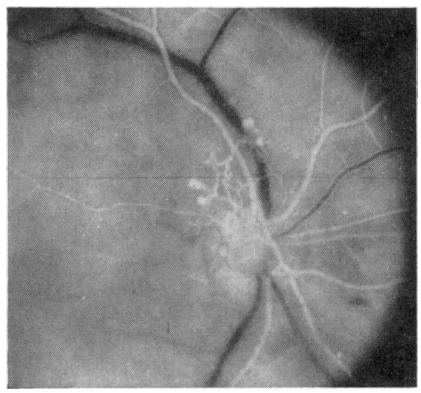

FIG. 1.—Right central fundus 6 seconds after fluorescein injection. Dye can be seen in branches of central retinal artery. Early filling in arterial phase is present in superotemporal new vessels adjacent to the disc.

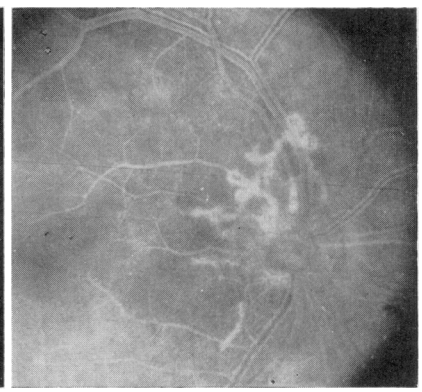

FIG. 2.—14 seconds after the injection the dye has reached the venous side, and laminar flow is apparent in the veins.

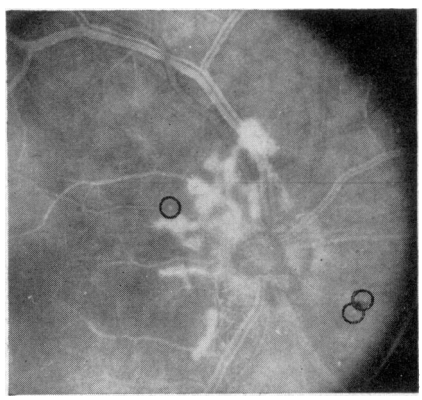

FIG. 3.—16 seconds after the injection. Microaneurysms are seen and some of these have been ringed. Two microaneurysms are seen in close proximity to a haemorrhage in the inferonasal quadrant, suggesting a causal relationship.

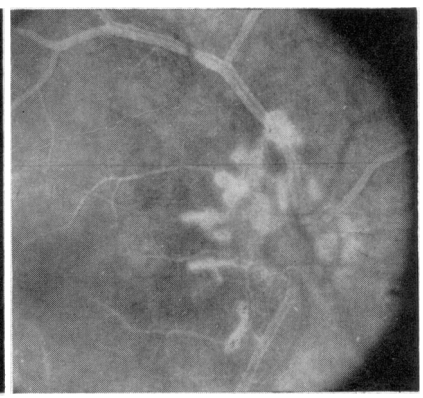

FIG. 4.—22 seconds after the injection. The new vessels show increased permeability and are sites for rapid extravasation of fluorescein into the tissues.

gap between the onset of the condition and facing the patient up to the diagnosis. The reason in Case 2 was to gain sympathy, and on one occasion admission to hospital.

The handling of artifact patients is not easy, but the fundamental approach of making them understand themselves is all-important. This should be done as early as possible. They must realize that one knows the origin of the lesions, and firmness, but not ruthlessness, is essential. "How do you produce them?" is a good opening gambit, which tends to elicit dissociated replies of great use in ascertaining the reason for the lesions. Gentian violet 0.5% with 25% water in emulsifying ointment is sometimes a useful application which helps healing and provides evidence of its use. It is messy enough to discourage the production of further lesions. The colour of the treatment gives the patient an excuse for getting better, and only if relapse takes place is it necessary to discuss the problem openly with the relatives. Between 1954 and 1959 one of us (R. H. S.) treated seven recently developed miscellaneous artifact cases, and all cleared within a few weeks of being seen, without subsequent relapse. It is not understood why, with the exception of Case 1, there have been no further artifacts from 1960 to 1966. In the total of nine patients there were three males.

Summary

Two cases of artifact ulcers and considerable nipping of bone, caused by rubber bands, are described. In one case the band was removed at operation; in the other case three bands were removed during dressings. The satisfactory treatment of eight other artifact cases from different causes is briefly mentioned, as well as some observations on general case management.

Medical Memoranda

Chloroquine Neuromyopathy Associated with Keratopathy and Retinopathy*

[WITH SPECIAL PLATE]

Brit. med. J., 1967, 2, 219–220

Chloroquine has been used to treat rheumatoid arthritis and discoid lupus erythematosus since 1951. Toxic effects include keratopathy and perifoveal retinopathy (Hobbs *et al.*, 1959), acute psychosis (Dornhorst and Robinson, 1963), and neuromyopathy (Whisnant *et al.*, 1963). We present a further example of severe chloroquine neuromyopathy associated with ocular lesions.

CASE HISTORY

A woman aged 49 of nervous disposition presented with extreme myopathy and poor vision. She had received three courses of electric convulsion therapy, and since 1960 had taken tranylcypromine, 20 mg. daily.

In July 1962 she had numbness and pain in the right shoulder and received chloroquine, 250 mg. daily, until June 1965. She also received phenylbutazone, which was not thought to be related to the ensuing disabilities. After 12 months she saw haloes and rainbow-like effects around street lights. After 18 months her legs became weak and "like lead," giving way beneath her, and she had difficulty in rising from a squatting position and in walking upstairs. After two years she complained of blurred vision and a white glare around objects. After three years her muscles had become so weak that she could hardly get out of bed, and when walking she had to hold on to furniture; she could read only one word of newsprint at a time and could see the rim of her dinner-plate but not the food. She had a persistent metallic taste in her mouth.

The only abnormal physical findings related to the ocular and muscular systems. There was profound generalized muscular weakness, no wasting or fasciculation, and all tendon reflexes were absent. She could not flex her head when lying, rise from a supine or squatting position, or stand on her heels. Her grip-strength in both hands, measured with an ergometer, was 8 kg. The vital capacity was 1,500 ml. There was no sensory loss. Ocular examination showed a visual acuity of 6/9 for both eyes, macular stippling, a ring-scotoma in both visual fields extending from 2 to 10 degrees with normal central and peripheral vision (Fig. 1), and, by slit-lamp, microscopic corneal deposits arranged in radial lines.

Relevant Laboratory Investigations.—Serum aldolase 34 units (normal 4–10 Bucher units), creatine phosphokinase 231 units (normal 0–40 units), glutamic oxaloacetic transaminase 56 units (normal 0–35 Sigma-Frankel units); total serum protein 7.2 g. and gamma-globulin 0.8 g./100 ml.; daily urinary creatine excretion 361 mg.; E.S.R. 5 mm./hour; lupus erythematosus cell test negative; test for rheumatoid factor negative. A muscle biopsy from the weak left tibialis anterior showed loss of muscle fibres with most of the sarcoplasm replaced by vacuoles, while cell walls, nuclei, and interstitial tissues were intact; there was scanty cellular infiltration (Special Plate, Fig. 2).

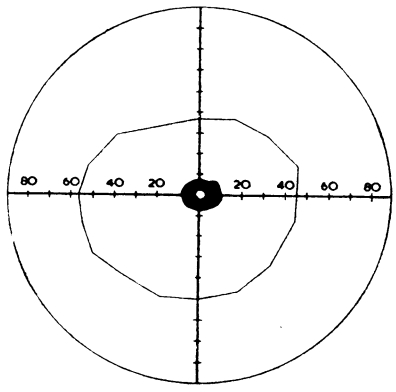

FIG. 1.—Right visual field showing macular ring-scotoma in black. Peripheral and central vision were normal. The left visual field was similar to the right one.

Progress.—Chloroquine was stopped. After three months muscle strength had improved, her strength of grip had increased from 8 to 28–30 kg. in both hands, the vital capacity had increased from 1,500 to 2,530 ml., and a second muscle biopsy showed considerable improvement (Special Plate, Fig. 3).

DISCUSSION

A middle-aged woman with arthritis developed severe weakness of muscles and defective vision due to treatment with chloroquine. Chloroquine neuromyopathy was described by Whisnant *et al.* (1963) in four patients, of whom three had

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