Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE EFFECTS OF EXPOSURE UPON THE TERMINALS OF HANDS AND FEET.

BY F. JEEVES, L.R.C.P. & S. EDIN., L.R.F.P.S. GLASG.,
CAPTAIN, R.A.M.C.(T.); MEDICAL OFFICER, H.M. HOSPITAL SHIP ——;
AND
E. R. HUNT, M.D. CANTAB., M.R.C.P. LOND.,
LIEUTENANT-COLONEL, R.A.M.C.(T.C.); CONSULTING PHYSICIAN TO THE NORTH RUSSIAN EXPEDITIONARY FORCE.

THE following case illustrates the different effects of exposure to (1) alternating extremes of temperature, (2) prolonged low temperature:—

Corporal W. B., aged 39, a monumental mason in civilian life, came out to North Russia on Oct. 1st, 1918. He had since been employed at the base. He gives a history of having been rejected for the Army in 1914—be believes on account of his teeth. He was in France from January, 1917, to October, 1917, where he was gassed, but did not suffer from trench-feet or frost-bite.

From Oct. 20th to Dec. 16th, 1918, he was employed in building stoves. As is customary among Russian masons, a mortar was used composed of clay and sand. The workmen use this with their hands instead of with a trowel, as in England, and they dip their hands at frequent intervals in extremely hot water to prevent the mortar sticking to them. He did the same. The weather was very cold, and his hands were consequently being exposed to extremes of heat and cold alternately. His feet, on the contrary, were constantly wet and cold, for he was unable to wear his Shackleton boots, and his ordinary boots were wet through, as he was frequently standing in water. He was wearing these wet boots for many hours daily. The first parts affected were

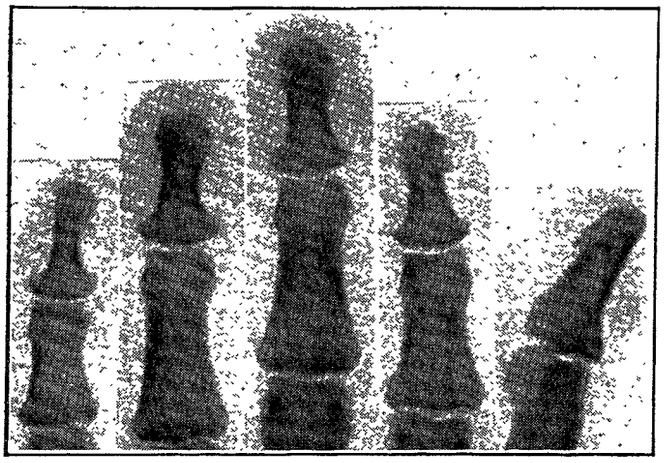

FIG. 1.—Shows increased bone formation in the fingers.

his hands and left great toe; then the other foot. They swelled up and "the nails seemed to spread." He had pains of a stinging character, worse when the hands and feet were getting warm again and after he had stopped moving about. The pain in his toes at night kept him awake.

He continued to work in spite of the pain until Dec. 16th, 1918, when he went sick on account of the severity of the pain in his left great toe. He states that he had little blisters at the bases of his finger-nails, but that his feet were not blistered, although distinctly blue. He was admitted to the hospital ship on Dec. 19th.

I (E. R. H.) saw him for the first time some three weeks later. He was then recovering and was able to be up and about the ward. The terminal phalanges of all his fingers, his thumbs, and the toes of both feet were much enlarged, presenting the appearance of clubbed fingers and toes seen in cases of congenital heart disease, though without the discolouration usual in this condition. Sensation to pin-prick was very much diminished over the terminal phalanges of his right thumb and forefinger and middle finger. The level of diminished sensation extended down to the middle of the second phalanx of the right ring finger and to the joint between the first and second phalanges of the right little finger behind, and to the metacarpo-phalangeal joint of the same finger in front. The left hand was less affected, but sensation was diminished over all the terminal phalanges. A very similar distribution of impaired sensibility was present over the toes of both feet. The knee-jerks were normal, but plantar reflexes only just obtainable. His pupils reacted to light. The lungs were normal. The first sound at the apex of the heart was reduplicated.

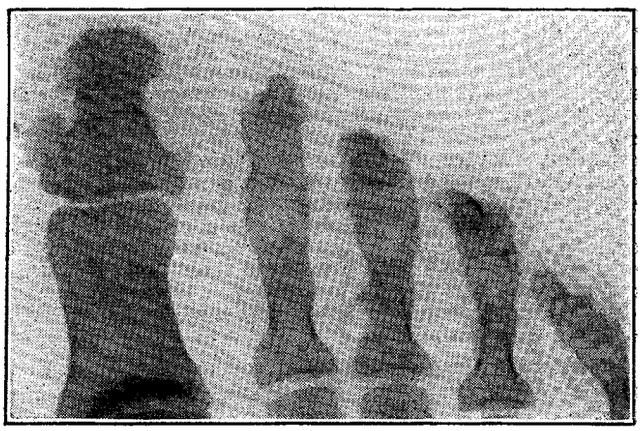

FIG. 2.—Shows erosion of the terminal phalanges of the toes.

The excellent skiagrams, for which I am indebted to Captain H. J. Cotter, M.C., R.A.M.C., show an interesting condition of the bones of the terminal phalanges of both hands and feet. In the fingers these bones show increased bone formation, whereas the terminal phalanges of the toes are eroded.

These different conditions illustrate remarkably the effects of alternating extremes of temperature as compared with that of prolonged exposure to cold only. The distribution of the sensory changes point to injury of the nerve endings and not to any peripheral neuritis. There was nothing to suggest a functional origin. The similarity of the sensory changes in both hands and feet suggests that the bone changes were caused by direct action of the temperature on the blood-vessels, and not primarily by interference with vaso-motor action through the damage to nerve-endings.

North Russia.

A CASE OF KERATODERMIA BLENNORRHAGICA.

BY S. C. DYKE, M.B., B.CH. OXON., D.P.H. OXON.,
ASSISTANT BACTERIOLOGIST, COLLEGE OF MEDICINE, NEWCASTLE-UPON-TYNE.

As details have been published of comparatively few cases of keratodermia occurring in association with gonorrhœa, the following may be of interest:—

The Case Described.

Patient, a private in a Labour Company in France, who, throughout his illness denied having ever had any venereal disease, was taken ill with "pains in the joints" about the last week of April, 1918. On May 5th he was admitted to a C.C.S.; temperature was then 100·6° F. and the left knee was greatly swollen. A diagnosis of acute rheumatism was made. Salicylates were administered and 50 c.cm. of turbid fluid showing polymorphonuclear lecuocytes was aspirated from the left knee. On May 23rd the notes record swelling of the joints of the right shoulder, wrist, and hand.

He was admitted to hospital in England at the beginning of June. The affected joints were all still swollen and tender, though not containing appreciable fluid. A soft systolic bruit was present at the apex which was in the fifth intercostal space, half inch internal to the vertical nipple line. Patient was weak and emaciated. There was still irregular pyrexia, up to about 100·5° F. at night. Salicylates gave no relief and were discontinued.

Condition of the Patient's Feet.

About the beginning of July the condition of the patient's feet began to attract attention. On admission the skin of the plantar surface was thick and calloused and showed a

tendency to come off in crusts. This is a state of affairs occasionally seen in men after they have been in bed some weeks, and no particular attention was paid to it until it was noticed that as the flakes separated they did not leave clean pink skin underneath; on the contrary, as the flakes of thickened epidermis came away new ones formed underneath them. This condition became rapidly aggravated until the whole plantar surface, the sides of the feet, and the dorsal surfaces of the ungual and, to a less degree, of the second phalanges were covered with a thick horny layer of desquamating epidermis. Cracks appeared in this

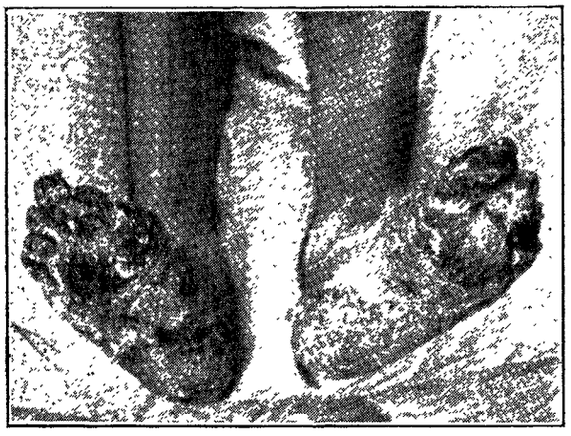

FIG. 1.—Feet before commencement of vaccine treatment.

desquamating layer, which was shed in fragments from the size of half-a-crown to a fine dust. As fast as the epidermis was thrown off further keratisation occurred in the underlying epithelium, which was later in its turn desquamated. The process went on underneath the nails, most of which in time separated and came away. Some traces of the same condition, in the shape of a branny desquamation around

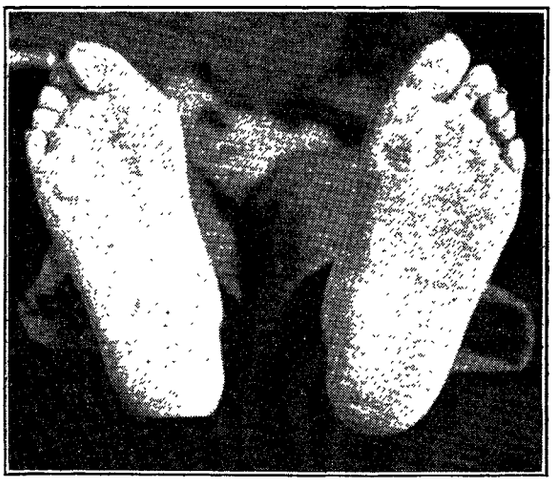

FIG. 2.—Feet one month after commencement of vaccine treatment.

the finger-nails, occurred on the hands. The palms were not affected. No inflammatory reaction accompanied the process, which was almost painless.

On June 6th a little sugar was present in the urine; this was absent at the next examination a few days later and thereafter.

Treatment with Gonorrhœal Vaccine.

At the end of June the case came under my care. The association of an arthritis, not responding to salicylates, with hyperkeratosis aroused suspicions of gonorrhœa. On looking for it a scanty purulent urethral discharge was found, which on examination by the pathologist to the hospital, Major A. G. Gibson, R.A.M.C., was found to contain Gram-negative diplococci. Further investigation revealed similar cocci and prostatic threads in large quantities in the urine. The Wassermann reaction was negative.

On the strength of the pathological report a course of gonococcal vaccine was given from July 10th to August 10th. A start was made with a dose of 5 millions, the dose being worked up to 300 millions, and 850 millions being given in the course of the month. The improvement in the condition of the feet was immediate and marked. After the first few doses the further keratisation beneath the already separating epidermis ceased, and at the end of the month most of the thickened skin had separated, leaving normal epidermis beneath. At the same time the pyrexia ceased. The joint condition, which, under radiant heat and massage, was improving before the commencement of the vaccine showed no marked change.

About the middle of August the patient was evacuated to an auxiliary hospital. His general health was then excellent. The condition of the skin was normal, but there were still considerable thickening and stiffness of the affected joints, particularly of those of the right hand. The urethral discharge had disappeared.

Remarks.

The points of interest in this case would seem to be:—1. The association of the skin condition with what was evidently a very severe attack of gonorrhœal arthritis. 2. Its late appearance in the disease. 3. Its prompt disappearance under vaccine treatment.

Oxford.

CRYPTOPODIA: AN UNDESCRIBED DISEASE.

BY E. C. BOUSFIELD, L.R.C.P. LOND., M.R.C.S., D.P.H. CAMB. & LOND.,

DIRECTOR, CAMBERWELL RESEARCH LABORATORIES; BACTERIOLOGIST CAMBERWELL AND HACKNEY.

THE remarkable case described below, unique, so far as I have been able to discover, came under my notice whilst taking a "busman's holiday" in charge of the practice of my friend, Dr. T. T. Brunyate, of Woodstock, by whose kind help I was able to get the patient to London for exhibition at a scientific meeting.

History of the Case.

The patient, a fresh-complexioned woman of 44, had never been out of the country. Enlargement of the feet was first noticed at the age of 15, coming on during the day and disappearing during sleep. In the following year it increased so much whilst she was in service that she sought advice as an out-patient at St. Bartholomew's Hospital, but attended once only, as she had to leave her situation. She appears

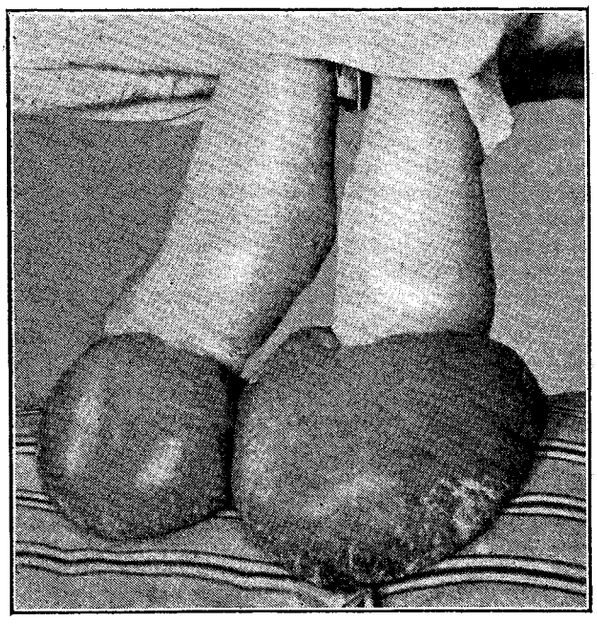

FIG. 1.—Dorsal aspect, showing the widely-separated hair-follicles.

to have continued in service, though with increasing difficulty, until her twenty-fifth year, when she was attacked by rheumatoid arthritis, which left her hands crippled, and since then the feet have got steadily worse, so that for ten years she has not been able to walk.

The photographs which I took of her in the Woodstock Infirmary show the condition better than any description. At the first glance the suggestion is that of elephantiasis, but the fact that the toes are not involved in the tumour, and