growth developing on soil or another suitable substratum from deposited parasitic spores. Soils contaminated with bird and animal droppings have been found to provide a natural habitat of *Histoplasma capsulatum* (Emmons, 1949; Ajello and Zeidberg, 1951), and it seems possible that in the present study the better results obtained in culture on cow dung, mole-hill soil, and chicken-run soil may have been due to the presence of animal excreta.

Summary

Hairs infected with *Trichophyton discoides* have been found on a scratching-post used by cattle infected with ringworm.

The parasitic spores of *T. discoides* in hair have been shown to survive for 15 months or longer when stored in the laboratory at room temperature.

T. discoides has been found to grow on sterilized soil and cow dung inoculated with infected hairs or with active cultures and incubated at 26° C. On the cow dung and one of the soil samples a conidial form of the fungus developed.

It is tentatively concluded that under natural conditions infection may occur either by parasitic spores of the fungus that have survived in inanimate material or by conidia formed as the result of saprophytic growth in soil and animal droppings.

Acknowledgment is made to Dr. J. Martin Beare and Dr. I. Martin-Scott, through whom the farm specimens were obtained.

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Medical Memoranda

A Standard Cystoscope and Biopsy Forceps

While no attempt should be made to curb individual ideas for the improvement of cystoscopic equipment it has long been evident that the standardization of as many parts as possible will make for economy, for simplicity of manufacture, and, more especially, for the ready interchange during use of one instrument for another. In the instruments here briefly described the systems of irrigation, of lighting, and of locking the various components in the sheath have been standardized.

CYSTOSCOPE (FIG. 1)

Irrigation is from a reservoir through a single large-bore three-way stopcock which gives a good inflow and outflow. A clean bladder can be inspected during and after gravity filling; a dirty one can be washed out through a faucet by a syringe whose nozzle fits it internally or by an evacuator which fits it externally. Once the telescope is in position further filling and emptying can be done without removing it.

The terminal for the lighting flex, which is sparkproof to comply with modern requirements, is always directly opposite the irrigating cock. Both are fixed to a rotating collar and can remain in position without the irrigating tubes and cord becoming entangled whilst the cystoscope is freely turned through 360 degrees in either direction.

The obturator, telescope, or faucet can be securely locked in position and easily unlocked by aligning two short vertical posts which indicate the upper side of the sheath and the component.

The set (Fig. 1) includes two sheaths, a circular one of size 42 Bé (21 Ch) and an oval one of 48 Bé (24 Ch). The same obturator, telescopes, irrigating stopcock, and faucets are used for each, and both have the same type of lamp of high efficiency with a festoon filament giving considerably more light than the usual cystoscopic bulb. The large-field examination telescope with an angle of view of 76 degrees in water covers a field of approximately 1½ in. (3.8 cm.) diameter at a distance of 1 in. (2.5 cm.). To obviate the need for a loose fin (which sometimes falls out) two more telescopes are provided—one with a double and one with a single catheterizing attachment. Each has an angle of view in water of 50 degrees and covers a field of approximately 1 in. (2.5 cm.) diameter at 1 in. (2.5 cm.) distance. The double catheterizing attachment admits two No. 12 Bé catheters through either sheath; the single attachment admits a No. 16 Bé electrode through the small sheath, or a No. 20 or operating scissors, etc., through

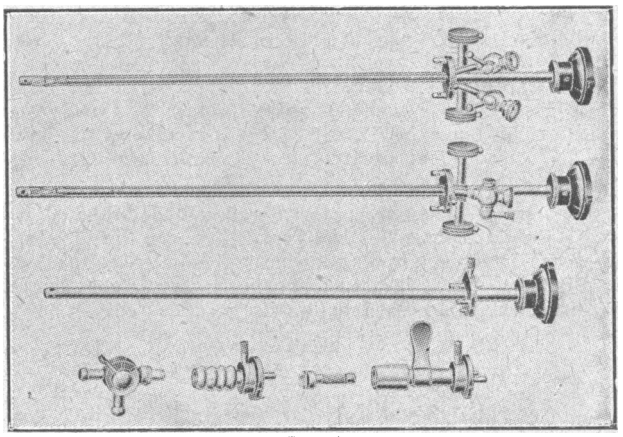

FIG. 1

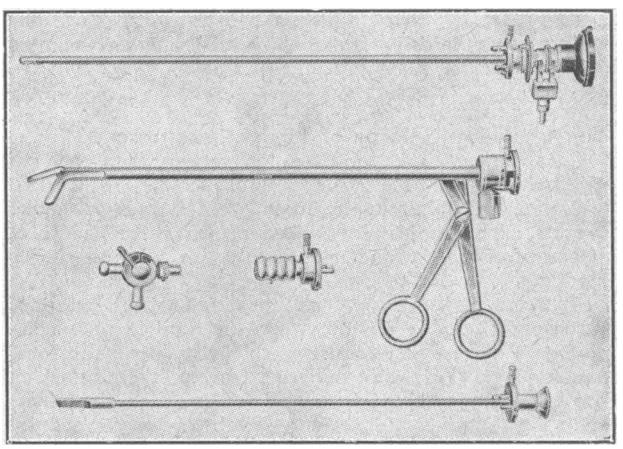

FIG. 2

the large sheath. The maximum working distance has been allowed between the eyepiece and the catheter spouts. The arrangement of the prism allows full inspection of the posterior urethra if the water inlet is kept open during examination.

The cystoscope is supplied in a perforated metal box, in which it can be boiled, or in a mahogany case.

For diagnostic cystoscopy a smaller version of the examination instrument has been made of size 36 Bé (18 Ch); it is useful for out-patient work under local analgesia.

CYSTOSCOPIC BIOPSY FORCEPS (FIG. 2)

This makes use of the same irrigating stopcock and faucet as the cystoscope. The lamp terminal is connected to the telescope by a forked clip, and if the cystoscopic lead is used the current must first be lowered, as the lamp is smaller. The field of vision of the telescope has a fore-oblique inclination of about 70 degrees from the horizontal to give a better view of the jaws; the telescope can be rotated through 60 degrees to allow a growth to be inspected before the jaws are brought into position.

This instrument is most useful for growths on the dome or lateral walls of the bladder which cannot easily be reached with the McCarthy telescope of Lowsley's biopsy forceps. Its main advantage, however, lies in the generous inlet for irrigation which enables a second or third bite to be taken if the first is unsatisfactory.

Both instruments can be sterilized by boiling with suitable precautions—that is, if put into tepid water first and allowed to cool before use. All the fittings are interchangeable, and can also be used on the G.U. single-handed resectoscope and the new G.U. panendoscope.

The instruments have been made for me by the Genito-Urinary Mfg. Co., Ltd., to whom I am greatly indebted. The cystoscope, which has been in use for over three years, is the work of the late Mr. R. Schranz; the optical systems and the completion of the biopsy forceps, which have been used for more than two years, are the work of Mr. A. E. Bean.

It is hoped to introduce the same standard fittings into other cystoscopic instruments in the course of time. No patent rights have been claimed by the makers, so there should be no great obstacle to standardization, at least among British firms.

ADDENDUM.—The only major alteration made in the cystoscope during its extended trial period has been the substitution of a larger stopcock, allowing a bigger irrigating flow. The makers will be pleased to fit the larger stopcock gratis to instruments purchased before its introduction.

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Interphalangeal Fusion following Frost-bite

Cutaneous and osseous syndactyly is a well-recognized congenital deformity. As an acquired lesion it occurs only as a result of sepsis. The following case is worth recording because of the hardship under which the lesion was acquired and the unusual radiographic appearance.

CASE REPORT

In August, 1942, a boy of 13 was taken prisoner by the Nazis and sent to a concentration camp, where he was permitted to work as a gardener until October, 1944. This position enabled him to maintain a state of nourishment of sorts, although his diet lacked protein. He had three attacks of dysentery and one of infective hepatitis during this time.

In October, 1944, he was moved to the notorious Auschwitz Camp in Poland, where he worked in a coal-mine on a meagre diet consisting chiefly of bread and soup.

In January, 1945, while suffering from a severe attack of sinusitis, he was forced to march for two days in intense cold. His socks were pieces of cloth draped around his feet, and, although he had shoes, they were not waterproof. The wire he used as shoe-laces abraded his feet. At the end of the march he and about a hundred others were herded into a coal-truck in which they spent eight days and nights with temperatures reaching 14° F. (−10° C.). He was too ill to eat much on account of sinusitis, and fluids were restricted to melted snow and water from the engine. One morning he awoke to find that he had lost both his shoes during the night, and that his feet were anaesthetic. He rubbed them with snow, but within a few days his feet were black. On jumping from the truck he believes he fractured his left great toe, and he then had to walk a mile with only cloth round his feet. At the end of this journey, on account of his abilities as an interpreter, he had the good fortune to be sent to a prison hospital, where he obtained some ichthyol lotion, which he applied on a cloth bandage to his feet with old rolls of film. Each foot became a granulating mass, and sequestra were repeatedly discharged.

Owing to the kindness of a French doctor, Dr. Lumière, he obtained extra nourishment in the form of occasional eggs, but, despite this, lost some 20 kg. in weight. This state of affairs continued until April, 1945, when the Germans withdrew, and he was enabled to have a good diet and to obtain suitable dressings.

He first came under the care of the Manchester Royal Infirmary in October, 1945, when all the toes of the right foot were found to be fused in one mass. A large granulating area was present on their dorsum. The dorsalis pedis pulse was not palpable. The left foot had healed with a foreshortened great toe and fusion of the fourth and fifth toes (Fig. 1).

The right foot eventually healed, and an attempt was made in November, 1946, to divide down the two bony bridges in the space between the first and second and the third and fourth toes of the right foot. This procedure was partially successful and a little separate movement of the individual segments is now possible.

The present appearance of his feet is best shown by the photographs below (Fig. 2).

FIG. 1.—Radiological appearances in October, 1946, showing complete interphalangeal bony fusion of the toes of the right foot.

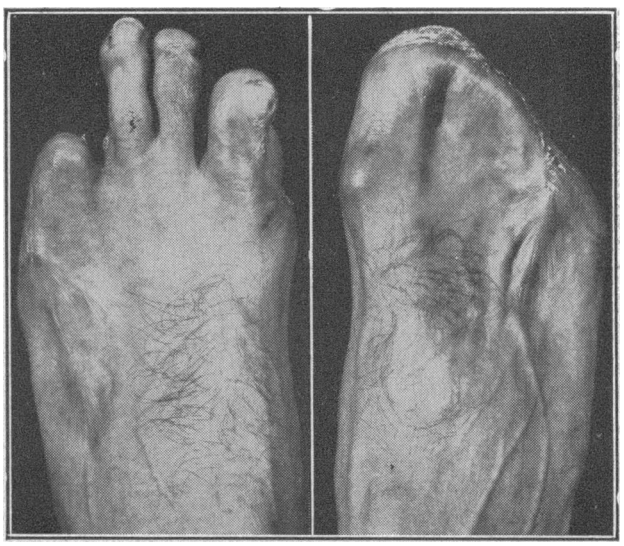

FIG. 2.—The present condition of the feet.

With suitable shoes and with regular chiropody he walks surprising well, and makes little of his disability. His own experiences and the suffering he has witnessed no doubt stimulated his interest in medicine, and he is now training as a medical student. We wish him every success.

I thank Sir Harry Platt for permission to publish this case history.

J. KENNETH WRIGHT, F.R.C.S.