GANGRENE OF FINGER CAUSED BY 5 PER CENT. PHENOL OINTMENT

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R. P., an ignorant Hungarian, received a slight scratch on the anterior surface of the second metacarpal (right) about April 17, 1911. He went home and applied a 5 per cent. phenol salve on a closed dressing, according to instructions given him by the druggist who sold the salve. April 24, he reported at my office with finger gangrenous from the distal end of the proximal phalanx to the root of the nail. The gangrene was dry and the finger was completely mummified and as hard as a stone. Moist hot dressings of weak liquor cresolis compositis were applied and by May 1 sloughs were separating. May 20 tendons and periosteum of phalanx had disappeared and May 26 finger was amputated one inch below metacarpophalangeal joint. The bone was soft and mushy and soft tissues devitalized. Recovery was uneventful.

Therapeutics

RINGWORM: TINEA TRICHOPHYTINA

To two very different diseases the name "tinea" has been given: one is tinea favosa, which is caused by the *Achorion schönleini*; the other is tinea trichophytina, which is caused by the vegetable parasitic fungus trichophyton. It is the latter to which the present remarks will be limited.

The effects of this fungus are usually divided into three subdivisions, according to the particular part of the body affected. When that part of the face on which the beard grows is affected, it is distinguished as tinea barbæ, or ringworm of the beard, or barber's itch. When the hair of the scalp is affected, it is known as tinea tonsurans, or ringworm of the scalp. When other parts of the body are affected it is known as tinea circinata, or ringworm of the body. These three varieties of the disease are also distinguished respectively as tinea trichophytina barbæ, tinea trichophytina capitis, and tinea trichophytina corporis. The same remedies are applicable to the treatment of these three forms of the disease, but the location in which the lesion is found necessitates some difference in their mode of application.

The trichophyton fungus is found and grows in the epidermal layer of the skin. It penetrates into the hair follicles, and also into the root and body of the hair. Its presence in the latter locations renders the application of drugs for its destruction very difficult, and it is on this account that the affection of the hairy scalp and of the beard is especially resistant to treatment.

There are several drugs which are useful in the treatment of the disease when they can be effectively applied. The most important are mercury, hyposulphite of sodium (sodii thiosulphas), tincture of iodine, and sulphur. When there are a few spots on the surface of the body, a useful application is the following:

R	Gm. or c.c.	
Hydrargyri chloridi corrosivi	10	gr.ii
Glycerini	5	or fl.3ii
Aque	ad 50	ad fl.3ii

M. et Sig.—Shake, and rub thoroughly into the lesion, twice a day.

The application of this lotion, or in fact of any remedy, should be preceded by a thorough scrubbing of the affected parts with hot water and soap, preferably soft soap or green soap. When the patient is a young child, care should be exercised not to apply too strong a

lotion and not to apply it to too extensive a portion of the body, for too liberal applications of strong mercurial lotions may cause mercurial poisoning.

Another very effective remedy for the trichophyton as well as for other vegetable parasitic growths is the hyposulphite of sodium. This may be used in the strength of 15 to 20 per cent. in water.

If one prefers to use an ointment—and ointments are often exceedingly useful because watery preparations do not easily penetrate the skin—an efficient ointment is the official unguentum hydrargyri ammoniati. This ointment is 10 per cent. in strength. If there are many spots of disease, or the skin is tender, it is well to dilute it with an equal part of lard or petroleum fat, as:

R	Gm.	
Unguenti hydrargyri ammoniati	15	or
Adipis benzoinati	15	aa 3ss

M. et Sig.—Apply to spots twice a day.

Sulphur may be used in ointment or lotion, but is not so efficient.

If the condition is chronic, and these washes and lotions do not prove effective, the patches may be painted with tincture of iodine. This may be repeated every day for several days until the inflammation becomes so great that the application causes objectionable discomfort.

Ointments containing chrysarobin (incorrectly called chrysophanic acid), or pyrogallol (pyrogallie acid) are effective, but should not often be used on account of the fact that they stain the skin and clothing, and sometimes cause considerable inflammation.

When the scalp is affected and the fungus has penetrated the hair follicles, it is often difficult to apply these remedies effectively. It is generally wise to cut the hair short, and even to shave the head. The hairs will usually be found broken, and it is generally desirable to remove as many of the hairs as possible before applying the remedy. The affected parts should then be thoroughly washed with soap and water, and lotions of corrosive sublimate or of the thiosulphate of sodium may be used.

In cases which prove resistant to other treatment, it is sometimes necessary to attempt a cure by producing an active inflammation of the affected part. This may be accomplished by painting the part with tincture of iodine, as has been already mentioned; or croton oil may be rubbed into the affected part; or the part may be painted with cantharidated collodion so as to produce a blister. This will often result in a rapid cure.

The x-ray has been used as a germicidal application, and as a promoter of a mild dermatitis (often a forerunner of a cure) in all parts of the body, and with frequent reports of success. The hair, if the ray is used on hairy parts, falls out, but seems to generally soon return.

When the beard is affected, the removal of the hairs can generally be more thoroughly accomplished, and then the various applications already enumerated may be used.

Poultices have been suggested for the purpose of softening the skin and cleaning off the crusts, but they are generally undesirable, as the moist heat favors the growth of the fungus.

These cases are often very obstinate, and treatment must sometimes be carried on, intermittently, for weeks. It often happens that an apparent cure results while a few of the fungi still remain in the skin without showing any evidence of their presence. Consequently, cases