

the bacilli, while ichthyol and camphor act as tonics. Unna's experience is not sufficiently large to form an opinion of the action of the salicylic acid preparations, gurgun balsam, arsenic, the mercurials, chinosol, airol, etc. Strychnine, however, is excellent in extensive anesthesia and involvement of the nerves.

Other accessory remedies are the salicyl-cannabis and salicyl-creosote guttuplast, where there is a much thickened horny layer over the nodes, and to remove the callous edges of indolent ulcers. Applications of Merck's 30 per cent. hydrogen peroxide (perhydrol) or washings with pernatrol soap (2 to 25 per cent.) have the same action and also destroy pigment. The pigment is also affected by the ningt. bismuthi oxychlorati, and where it is desired to remove erythematous patches, 2 to 5 per cent. of fluid extract of rhubarb may be added.

Marked cyanosis of hands and feet calls for the use of local hot baths containing mustard flour or of poultices made of it.

The destruction of bacilli by the various caustics can be followed on pathological preparations by means of the Victoria blue-safranin stain. In parts cauterized with the caustic paste or with potash, almost all the bacilli, except in the deeper tissues and laterally, are yellow. The same may be found in areas treated with carbolic acid and heat. After the use of strong mineral acids, on the other hand, the greater number of bacilli are still blue, showing that they still retain the substance which has an affinity for the Victoria blue, even though they need not necessarily be alive.

Cures by the external treatment have been doubted, as the leprosy nodes in the internal organs are not taken into consideration. Unna had occasion to examine the lymph-nodes of two cases which had been actively treated, and to his astonishment could not detect any bacilli, even though the nodes were swollen. No doubt the same thing may occur in liver, spleen, and testes, for the external remedies employed are not limited in their action to the skin, but also enter the system. His cure is therefore not a strictly external one, but is both external and internal. The rapid general improvement certainly speaks in favor of this view. It has also been stated that the use of such drugs as pyrogallie acid is liable to set up serious renal disturbances, particularly since, according to Lie, 40 per cent. of all lepers already show traces of albumin in the urine. In reply to this, Unna states that he has had occasion to examine histologically seven kidneys from patients who had died of leprosy. They were not only free from bacilli, but actually showed no lesions whatever.