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Treatment of Recurrent Tropical Lymphangitis.

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Recurrent tropical lymphangitis is very prevalent in Puerto Rico, and the internist is confronted with the problem of treatment for such cases. For a period of one year we have treated 3 series of cases with streptococcus vaccines and streptococcus filtrates. On the results obtained is based this report.

The vaccine used in the first group was prepared from 2 strains (S.T.M. strains L_9 and L_{12}) of beta-hemolytic streptococci isolated from small ulcers on the feet of each of 2 cases of recurrent lymphangitis during acute attacks, after passage through a mouse and incubation for 48 hours at 37°C. in tryptic digest broth. It contains approximately 1,200,000 dead organisms per cubic millimeter. Fourteen unselected cases have been treated with this vaccine. The injections were given subcutaneously every Tuesday and Saturday over the anterior aspect of the lower third of the thigh of the affected lower extremity. The initial dose was usually 600,000 organisms and the succeeding doses were increased gradually as tolerance developed; the interval between injections was lengthened according to results. The reaction from each injection was carefully recorded at the next visit; its description included a note on the severity and duration of local inflammation, the presence or absence of groin pain and development of systemic symptoms such as chilliness, feverish sensation, headache, general aches and pains. Of 14 cases treated, 7 are eliminated because they give no information as to the result of the treatment. Four abandoned treatment within 3 months. Three have only recently been added to the series. In 3 out of 7 cases, apparent benefit has been obtained from the use of the vaccine. In 3 other cases the vaccine failed completely. In a seventh case there seems to be some improvement which, however, is not very definite.

Group two was treated with a vaccine prepared with exactly the same technique as vaccine No. 1, but contains, besides the 2 strains of streptococci isolated from lymphangitis, one strain isolated from erysipelas and another isolated from scarlet fever. Its bacterial content is the same as in vaccine 1 and the same technique of administration was followed. Of 9 cases treated, 4 abandoned treat-

ment within 2 months. In 2 of the other 5, there was an apparent cessation of pyrexial attacks; in a third results so far have been satisfactory; in the 2 remaining cases results have been *nil.*

A third group was treated with streptococcus filtrate. A strain of beta-hemolytic streptococcus (STM strain L_7) isolated from a case of lymphangitis was grown on streptococcus toxin broth (St. Methods, N. Y. State Dept. of Health, 1927) at 37°C. for 48 hours and placed in the ice box for another 48 hours. Then the broth was passed through a W. Berkefeld filter and bottled; no preservative was added. The bottles were kept in the ice box. Susceptible individuals react locally to small doses of this filtrate when injected intradermally. Injections were given over the anterior aspect of the lower third of the affected thigh, in some cases intradermally, in others subcutaneously. The initial dose was as a rule 0.05 cc. of a 1:100 dilution of the filtrate. This dose was increased gradually until the patient tolerated increasing amounts of the undiluted filtrate. There are 22 cases in this group. Three have been treated for a short time. In 5 cases the treatment has failed completely, in 3 cases the results seem to be beneficial, in 11 cases the results have been highly satisfactory. No special observations have been made on the effects of edema and fibrosis but some patients claim a reduction in the size of the leg. The intradermal administration of the filtrate seems to be more effective than the subcutaneous.

The evaluation of the efficacy of any treatment for recurrent tropical lymphangitis is of necessity difficult. There are no well established clinical criteria by which to measure the benefit or failure of treatment. The frequency and severity of the attacks is the only logical criterium by which results can be judged, yet in this condition spontaneous remissions occur during which there may be no attacks for months or years. The story is often repeated by patients of remissions brought about by a course of neoarsphenamine, by injection of anti-plague or typhoid vaccine, or by taking a decoction of herbs and roots. Only after careful observation for a period of many years can a final word be said concerning apparent favorable results of treatment. In our short observation, however, the filtrate seems to be more effective than the vaccine, specially when given intradermally. The apparently definite rôle of mycotic and other dermatologic conditions of the feet in these cases will be dealt with later.