

# Porto Rico Health Review

Official Bulletin of the Department of Health

Published monthly by the Department of Health of Porto Rico.

VOL. II

JULY 1926

No. 1

## FRAMBESIA TROPICA AND SYPHILIS: INFLUENCE OF MALARIA

By HERMAN GOODMAN, B. S., M. D.

The recent article of Ernesto Quintero, M. D., in the PORTO RICO HEALTH REVIEW encourages me to submit the following notes.

Frambesia tropica and syphilis have certain similarities and still other dissimilarities. Historically, the diseases have been associated more closely than is ordinarily known. The claim has been made that frambesia and syphilis may be recognized from Biblical descriptions. This is far-fetched. More likely, the two diseases were uncovered after the discovery of America. Oviedo described the disease as "bubas", a name by which frambesia is still known in the West Indies. It is especially interesting to note that one of the earliest works accredited as proving that syphilis in Europe originated in America is entitled "Tratado llamado Fruto de todos los Santos contra el mal de la Isla Española, hecho por maestro Rodrigo de Isla, cirujano, vecino de Lisboa, para común e general provecho de los pacientes enfermos de la semejante enfermedad que vulgarmente es llamada 'bubas'" (Treatise, entitled Fruit of all Saints against the disease of the Spanish islands, by Master Rodrigo de Isla, Surgeon, and Citizen of Lisboa, to the common and general good of those suffering from the disease in question, commonly called "Bubas").

I do not believe that it is necessary at this time to review the clinical features of the two diseases, frambesia and syphilis. During my sojourn in tropical parts, I had the opportunity of making a study of tropical syphilis, or perhaps, better, syphilis among inhabitants of the tropics, and also frambesia tropica.

Elsewhere, I have given detailed descriptions and features of interest as to history, diagnosis, and treatment of these diseases. See, for example, *Archives of Dermatology and Syphilology* for July 1920; also *American Journal of Syphilis*, January 1926. Since returning to practice in the United States I have diagnosed but one case of frambesia tropica in a colored girl recently arrived from South America.



With the increasing use of the malaria-infection method of treatment for paresis, I gave thought to the influence of endemic malaria on the biology of syphilis in hosts chronically infected with the malaria plasmodium. I believe that the following comments are of interest, and especially in the tropics, confirmation or denial will come.

In the earlier days of clinical observation, and tabulation of data it was common to find in the text books on syphilis, mention of certain areas of the globe which were apparently free from the nervous involvement of syphilis although syphilitic infection of the people was common enough in those localities. The tropics have been noted for the absence of the nerve involvement of syphilis. Speculation as to this has been rife. The inhabitants of the tropics were thought to be resistant to the nerve invasion. Strains of spirochetes with an affinity for the nerve tissue have been offered. Whether the confirmatory laboratory strains are as selectively neurotrophic in the human host as in the experimental animals is difficult to determine.

On the other hand, the recent work of good clinical response of patients with early neurosyphilis to inoculation of malarial parasites, and the hyperpyrexia attendant on the blood invasion would seem to indicate that perhaps the tropical inhabitant, rarely if ever entirely immune to malaria, has been fortunate in the application of a natural malaria treatment for syphilis of the general system, and more particularly in the prophylaxis of neural syphilis.

Another possibility presents itself. Has transmittation of organisms been possible from the spirochete of frambesia to the spirochete of syphilis? Has the tropical disease become the pandemic one? Has the symbiosis of the original spirochete and the malarial organism given frambesia? Has the same spirochete in the absence of the concomitant malaria given syphilis to the world?

In conclusion I will outline a biologic reaction which may give presumptive proof that the organisms of yaws and syphilis are not identical to-day. The spirochetes obtained from a case known to be syphilis are inoculated over one eyebrow of a susceptible monkey. There is a take with positive clinical evidence and demonstration of spirochetes recovered from the site of inoculation. Then the spirochetes from a yaws patient are inoculated over the eyebrow. A second successful take proves the organisms to be biologically different, because an attempt to inoculate the second eyebrow with known spirochetes of syphilis would have been negative. If the first eyebrow inoculation is made from spirochetes of yaws, and is successful, the second eyebrow may be successfully inoculated with spirochetes of syphilis. Thus we have the basis of a biologic reaction.

If the spirochetes are from a suspected but unproven case of yaws, the monkey has to take with spirochete *pertenuis*. The second eyebrow shows a take with *spirocheta pallida* of syphilis. The first eyebrow inoculation could not have been *pallida*.

It should be remembered that frambesia is one of the small groups of diseases which gives a so-called paradoxical positive Wassermann, that is, a positive Wassermann in the absence of syphilis.

The new school of tropical medicine just finished in Porto Rico has a rich and fertile field for research and such important questions as this one will in all probability be cleared for the good of mankind.

