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Syphilis

A grave socioeconomic problem which the World has yet to solve

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With the advent of penicillin not only the early infectious syphilis but also the late symptomatic syphilis has been made possible to be completely cured. To eradicate syphilis, as a major venereal disease, has however remained a difficult task, despite all the best public health measures taken by the various progressive governments. It was believed at one time that with the improvement of socioeconomic conditions of the population syphilis could be brought safely under control. But this has proved erroneous; in many well developed countries, the mortality rate due to syphilis may have declined, but morbidity has definitely remained as active as before, and at times there has been a growing tendency for the disease to spread among the teenagers. WATT (1961) reported that the proportion of venereal disease in «adcslestants» had increased considerably in 1960 in the United Kingdom.

The problem of venereal diseases has been upper most in the minds of all medical workers. In 1899 an International Conference on Syphilis and Venereal Diseases was held in Brussels, where it was resolved that «all Governments should appoint in each country a commission charged (a) to determine the frequency of V.D. in the civil population, (b) to inquire as to facilities for treatment already available, and (c) to collect opinions as to the best means of controlling venereal diseases».

At a subsequent conference held somewhere in 1902, it was decided that (a) the treatment of V.D. by unqualified people should be forbidden, and (b) free and confidential treatment be made available to all. In 1913 a Royal Commission was appointed to inquire into the prevalence of V.D. in the United Kingdom, their effects upon the health of the community and the means by which those afflicted could be alleviated.

HARRISON (1939) reported that the mortality of infants certified as due to syphilis in England, the rate per 1,000 live births in 1912 was 1.34; in 1917 it had risen to 2.03; and from then it had declined steadily to 0.23 in 1937. It is a well known fact that the incidence of syphilis rises during wars. ANDERSON (1942) disclosed in Nairobi that in the 1914-1918 war, 42,000 troops of one of the Dominions, there were 960 admissions to hospital per day in one month. In 1915 in Egypt 800 to 1,000 men were being infected per day. Demobilisation brought its problems, as the incidence of venereal disease in the army of the Rhine in 1923 was 136.3 per 1,000 men. By 1924 the rate had fallen to 38.4 per 1,000 (SEQUEIRA, 1939).

In 1945 M. MICHAEL-SHAW, writing in the *Practitioner*, reported that «during the 10 years 1934 to 1943, the number of congenital syphilis under one year, death with for the first time at clinic in England were as follows:

1934	296
1935	251
1936	241
1937	211
1938	216
1939	217
1940	191
1941	223
1942	245
1943	310

In Kenya, as an accompaniment to war-time conditions the spread of venereal disease took place at a terrific rate. In the Annual Report of 1945, the Medical Officer of Health stated that, «the number

of syphilis treated during the year (1945) was 17,105, an increase of 3,998 on the figure for 1944». During the war years (1939-1945), it was recorded (DE MELLO, 1948), that the rate of incidence of syphilis among Africans in Kenya was about 25 per cent.

Earlier observers had given very interesting reports of the disease in East Africa. COOK (1936) described how syphilis had threatened to destroy the inhabitants of the Protectorate of Uganda, as he had come to the conclusion in 1897 that «80 % of the Baganda had at one time or another contracted the disease». In 1907 Col. LAMBKIN made similar observations in Kampala (Uganda). According to MUWAZI, TROWELL and HENNESSY (1942), they observed that «it was difficult to estimate the proportion of the adult population which is infected with syphilis, but routine Kahn tests on hospital in-patients of both sexes give about 60 % to 70 % of positives». Similarly, HUDSON (1932) had relied on serum reaction in estimating the percentage of syphilis among the Euphrates Arabs!

In 1945 (DE MELLO) it was felt that a great disparity existed in the figures generally quoted about the incidence of syphilis in Africans. It was also noted that yaws (framboesia) and syphilis were closely allied to each other in their clinical manifestations and caused great difficulty in the diagnosis.

YAWS AND SYPHILIS CONTROVERSY

Syphilis is believed to have its origin in America. According to some syphilologists, syphilis was introduced into Spain in the year 1493 and 1494 by the crew of Columbus, who brought it from Central America, especially from the island of Haiti. There is however some controversy over the origin of the disease; some observers hold the view that syphilis originated in Eastern Asia, while H. L. GORDON's (Kenya) hypothesis was that before Columbus voyaged, «the great Portuguese navigators might have already brought the disease to Europe during some forty years of active trading on the West coast of Africa». Curiously enough in Ceylon it is believed that syphilis was introduced to the island from Europe either via Afganistan and India, or direct via the sea route. GUNAWARDENA (1946) states that the «Portuguese introduced *parangi* to Ceylon», and then he describes *parangi* as not a venereal

disease, «*parangi* is spread by direct contact or flies or infected clothing, it is not transmitted hereditarily to children, though children may get infected in early life, and, most significant of all, are easily cured».

For all accounts, *parangi* appears to be yaws, which the Portuguese may have introduced in the Far East, from their contact and association with the entire coast of West and East Africa as early as 1415.

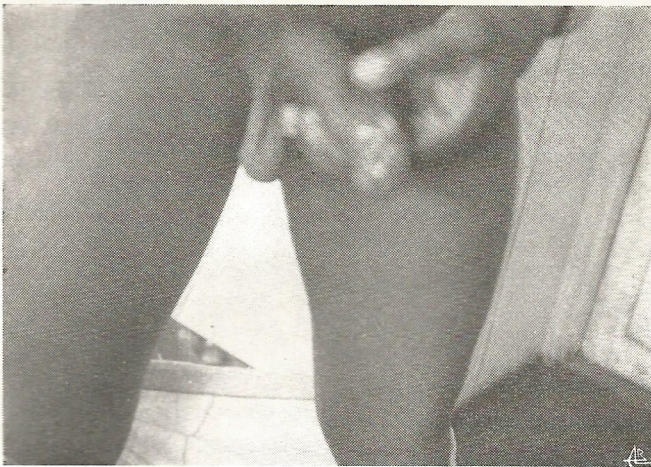
Yaws is endemic in Africa and the Middle East. American workers who have studied yaws in Haiti have found lesions caused by yaws to be quite different from syphilitic lesions among the negroes in the United States. The *Treponema pertenue* (the spirochaeta pallidula first described by CASTELLANI in 1905), which transmits the infection of yaws, is indistinguishable morphologically from that of the *Treponema pallidum* (the spirochaeta which transmits the syphilitic infection), and both diseases have similar serological reactions, and both respond to the same treatment. STANNUS was perhaps the first to observe that epidemiologically, clinically, and in their difference as regards transplacental transmission, yaws and syphilis should be considered as two different diseases.

A great deal of confusion has existed in differentiating yaws from syphilis by earlier observers in Africa. DAVIES (1947) criticised LAMBKIN and KEANE for wrongly diagnosing yaws as syphilis in Uganda. Serological examination is therefore not a criterion in assessing the percentage of syphilitic cases in the population, especially where yaws are endemic. HASSELMANN, in 1932, reported that the Wassermann reaction in the cerebro-spinal fluid of yaws' patients in the Sudan was always negative.

CLINICAL MANIFESTATIONS

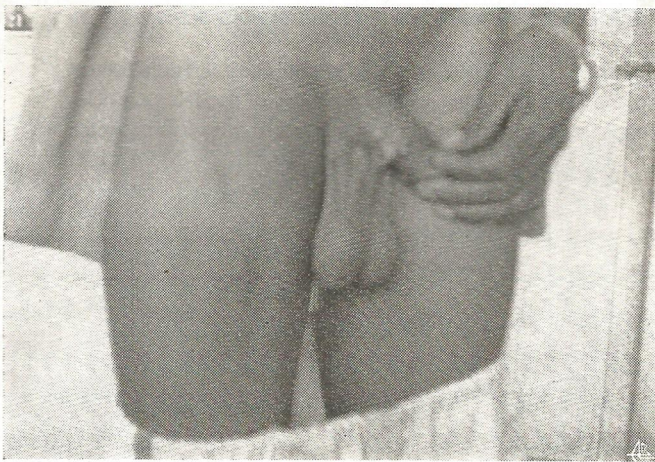
The typical syphilitic sore, is hard, indurated and found in the region of the genitalia. In yaws, the primary ulcer is generally extragenital with no induration and without the undermined edges. Yaws have a thick layer of crust, and the regional lymphatic glands are not enlarged. This factor is very important in the differential diagnosis. In a syphilitic extra-genital ulcer the lymph glands are acutely inflamed and painful.

Multiple primary lesions among Africans are not uncommon. The ulcers are indurated, red, ham



Multiple primary ulcers.

coloured and elevated. On many occasions there have been cases with a genital sore and several extra-genital ulcers in the same patient.



Multiple chancres on the body of the penis near the scrotum

Multiple primary sores should not be confused with soft chancres which cause inflamed glands and painful buboes. Whereas in cases of yaws, the glands are not affected at all. A primary syphilitic ulcer will persist from healing. In women the primary lesion is frequent on the cervix, labia majora, labia minora and in the fourchette.

The secondary stage. — The rash is sometimes not so evident in the dark skin, but on closer observation, it can be easily detected. In every case the African comes for treatment when the disease is well over the secondary stage and consequently the blood reaction is markedly sero-positive. Most of the

patients come with extensive condylomas, which are infected with pyogenic organisms emitting foul smell and causing painful buboes. Then, there are the other type with impetigenous secondary syphilides affecting the nose, angle of the mouth, below the arm-pits and the back of the elbow; these are often mistaken for yaws, but the history of syphilis is an important factor.

The commonest manifestations are mucous patches affecting the tongue, tonsils, palate, gums, vulva, groin and below the fold of the breasts. Cardiovascular conditions have been noted by many pathologists in East Africa. WILLIAMS (1938) stated that syphilis accounted for more than half the cases of heart diseases in his series. In South Africa, HEIMANN and others (1929) found about a quarter of the heart disease in town-dwelling natives to be due to syphilis, but on the evidence of BURTON (1934) it would appear that this is less common in the rural native population. However, it must be stated that though carditis is not infrequent in Africans with late secondary syphilis, it is our observation that aortic aneurysm is very rarely seen both clinically and at autopsies. Most of the cardiovascular cases in our series were rheumatic in origin.

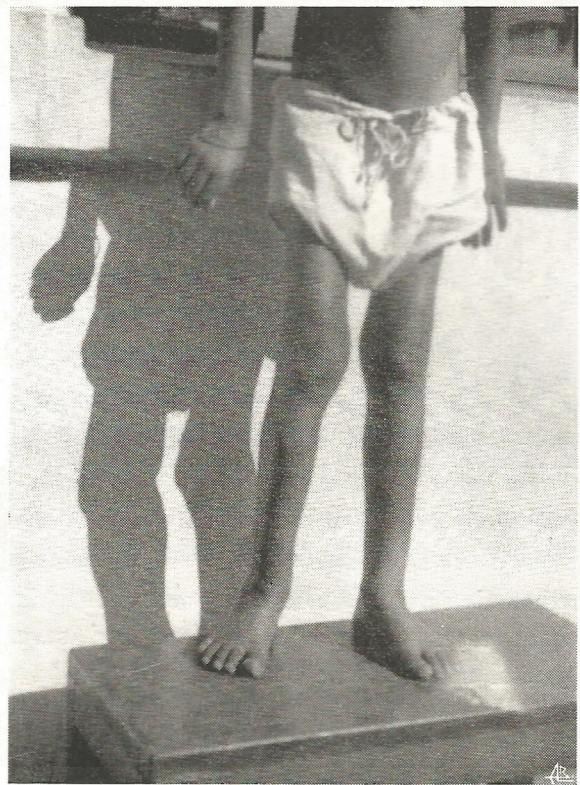
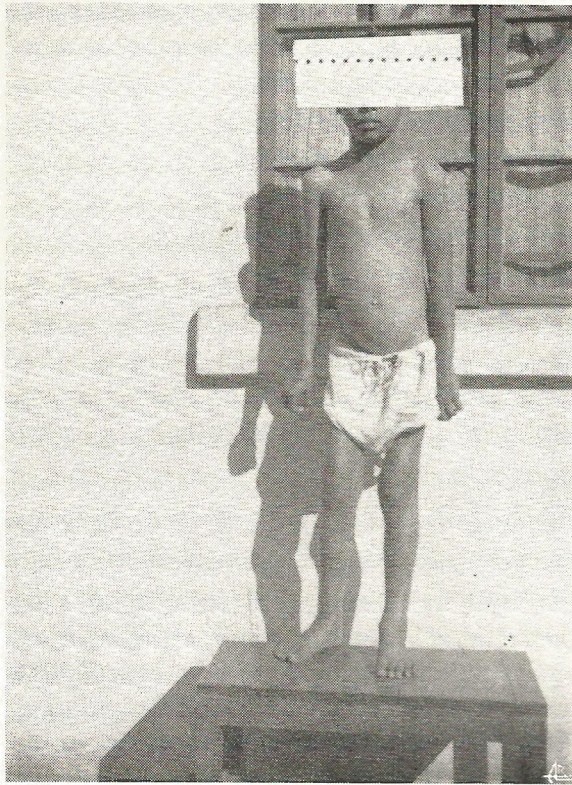
Tertiary syphilis. — It is very uncommon to see gummatous ulcers of the bones. The frequent ulcers encountered in general practice in Kenya are: (1) perforated palates; (2) ulcerated tonsils and pharynx in elderly patients; (3) chronic ulcers on the bones — gummata in the bones, chiefly tibia and cranium. Diffuse thickening affecting the tibia (sabre tibia).

Cutaneous gumma are hard painless lumps in the subcutaneous tissue. The overlying skin often ulcerates and forms the typical punched out ulcer with wash-leather base.

Neuro-syphilis. — Several observers in Africa have recorded that neurotropic type of manifestation is not uncommon in the African, although it is said that tabes dorsalis is rare in the tropics. CAROTHERS (1940) found eight cases of meningovascular syphilis in 1939 with seven deaths. Six of these were clinically typical cases of G.P.I. In another ten cases admitted, four were G.P.I.

Bones and joints. — Syphilis and yaws have the tendency to affect long bones, the tibia is more frequently involved. But periostitis of the joints, especially the wrist and the clavicle, particularly at its sternal end, is more common in cases of syphilis.

When the clavicle is affected, it usually manifests itself as a nodular swelling. Joints are involved in



A case of syphilitic periostitis and acute epiphysitis in an Asian child, aged 6 years. Both the tibia had periosteal nodes and were sabre shaped. The elbow joints were painful during movements. There was a swelling of the left sternoclavicular joint. Also acute epiphysitis of both wrists. The sabre appearance can be best seen on the shadows on the wall.

secondary and tertiary stage. The pathologic changes and damage to trophic nerves of the joints are evident, both in yaws and syphilis. In late syphilis, and in late congenital syphilis, painless hydrarthrosis (chronic infusion) in ankles, elbows and wrists may occur. CHARCOT'S disease or neurogenic arthropathy of the knees and elbows are manifested, both in late syphilis and yaws.

CONGENITAL SYPHILIS

Congenital or heredo-syphilis is caused by the infection of the foetus *in utero*. Those infants who are born with the infection are usually marasmic, with large spleen and liver, and inflamed joints due to periostitis, epiphysitis and synovitis. In congenital syphilitic infants a constant nasal discharge and chronic rhinitis (snuffles) prevents nasal breathing and normal sucking. Condylomatas appear in infants between 3 to 6 months. The majority of these children do not live long, although some such children with classical manifestations of congenital signs and symptoms have been observed occasionally in gene-

ral practice, but it is difficult to assess whether these cases are due to yaws or syphilis.

Congenital syphilis is curable and in most of the cases treated the response has been excellent. Serologic tests may not have shown any significant changes, but clinically these cases have shown considerable improvement in health. «Congenital syphilis is a preventable disease which, with the facilities already existing, could be greatly reduced» (*The British Medical Journal*, 1956).

THERAPY

Penicillin is one of the better drugs for the treatment of syphilis. It is being manufactured widely and its use shows very good results in the treatment of yaws and syphilis.

Penicillin is the drug of choice, because it is safe and easy to administer. Once the treatment has been started, the patient must be followed up carefully, and all the contacts must also receive similar treatment. In early infection, the initial doses should be 2,400,000 units, and this should be followed by 600,000 units every four days for four doses.

Six million units of penicillin should be given over a period of 10 days, in latent syphilis. Various proprietary antibiotic preparations are in the market and most of these drugs are useful products to cure the disease.

SERODIAGNOSIS

The standard serological tests for syphilis are either the complement-fixation test (WASSERMANN) or the flocculation test (KAHN). The treponemal immobilization test is important, because it will indicate that a person has or has had syphilitic infection. Whether or not therapy should be given must be decided on the basis of the trend of the quantitative reagin tests and on the adequacy of any previous treatment given (KERN, 1954).

Unfortunately the treponemal immobilisation test (T.P.I.) cannot differentiate between various treponemal diseases such as syphilis and yaws (WILKINSON, 1954). Thus differential diagnosis remains a difficult clinical problem in many negro patients attending clinics (NICOL, 1961).



Extra-genital chancre. The ulcer has a clean base, with undermined edges. Note the maxillary glands are acutely inflamed.

Photo taken by Dr. Paul Frankl.

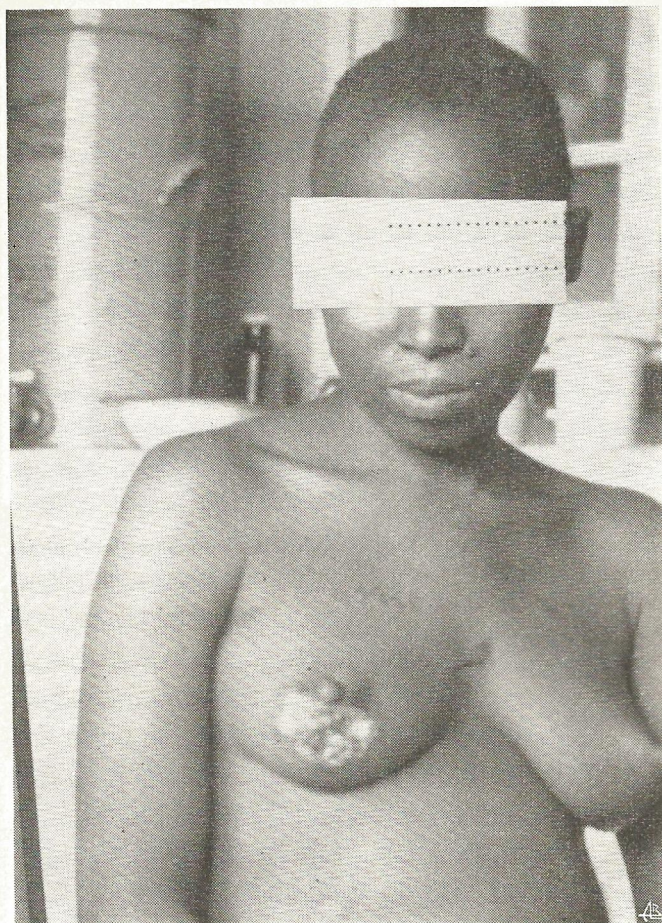


A primary chancre. This lesion is the erosive type. The base is indurated and when taken between the finger and thumb the lesion feels like a piece of cartilage.

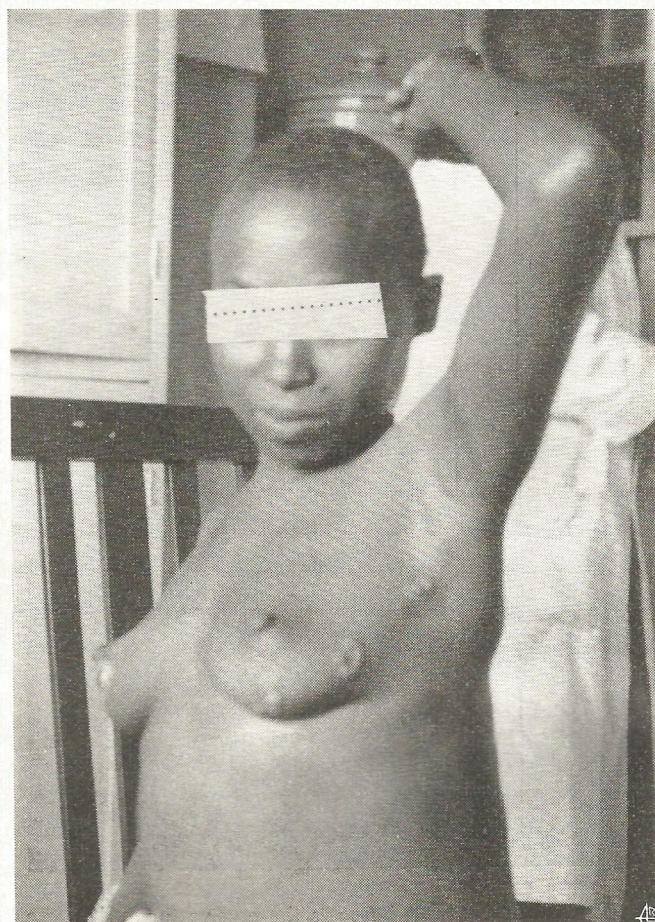
Photo taken by Dr. Paul Frankl.



Massive condylomas are common in syphilis. Note the inguinal and femoral glands are enlarged.



Although yaws cause a great destruction of the tissues — the regional glands are not enlarged as in cases of syphilis.



Typical ulcers of secondary yaws. The axillary glands are not affected. As stated before, the regional glands are not enlarged.



Papular lesions with central hyperpigmentation below the lower lip and in the angle of the mouth. These type of lesions are common in syphilis.



Ring shaped or annular type of secondary syphilis on the jaw and below the lower lip. This type of skin manifestation of syphilis in the secondary stage should not be mistaken for annular forms of seborrheic dermatitis or ringworm.



Condylomas in the anal region of a child of two years.



Dipigmentation spots all over the body after receiving treatment with penicillin — this patient had multiple syphilitic ulcers on the penis.

RÉSUMÉ

Avec la pénicilline on peut très facilement guérir les atteints de syphilis. Sa complète extirpation n'a pas encore été obtenue par les différents gouvernements y intéressés. WATT (1961) a écrit que les maladies vénériennes parmi la population adolescente en Angleterre 1960 étaient en train d'augmenter. En temps de guerre les maladies vénériennes en général augmentent. DE MELLO a constaté (Kenya, 1945) que les cas de syphilis chez les africains n'étaient si fréquents que l'indiquaient les investigateurs précédents. Les «boubas» («framboesia») et la syphilis se ressemblent tellement dans leurs manifestations que le diagnostic différentiel devient difficile.

«Boubas» et syphilis

On considère que la syphilis a eu son origine en Amérique. Selon certains investigateurs la syphilis fut introduit en Espagne en 1493 et 1494 par l'équipage de Colomb, laquelle l'a apportée de l'île de Haïti.

GORDON (Kenya) croit que les Portugais, voyageant en Afrique depuis 40 années par rapport aux voyages de Colomb, aient acquis les «boubas», en transmettant à leur tour l'infection

aux populations de Ceylan et des pays de l'Orient. GUNAWARDENA (1946) observe que le «parangi» n'est pas une maladie vénérienne et fut introduit à Ceylan par les Portugais. «Parangi» et «Boubas» seront-ils la même maladie? Le *Treponema pertuae* et le *Treponema pallidum* donnent des réactions sérologiques identiques et cèdent au même traitement. Dans ce sens, en Afrique, il est difficile à faire la distinction entre les «boubas» et la syphilis. DAVIES (1947) a critiqué à LAMBKIN et KEANE leur faillite au diagnostic de la maladie «boubas», prépondérante en Ouganda. C'est pourquoi les investigateurs en Ouganda ont référé 80 % d'atteints de syphilis parmi la population africaine.

Les manifestations de la syphilis.

Les lésions multiples sont fréquentes chez les africains et les photographies nous en montrent les différents aspects. L'ulcère syphilitique affecte les ganglions inguinaux, tandis que dans le cas des «boubas» les ganglions ne sont pas affectés. Il est difficile de faire en Afrique le diagnostic entre les «boubas» et la syphilis. La syphilis secondaire peut affecter la langue, la voûte palatine, la vulve et le sein, etc. Les symptômes à l'origine cardio-vasculaire sont fréquents chez les africains, mais ils ne sont pas tous le résultat de la syphilis car beaucoup de ces cas sont une conséquence du rhumatisme. L'anévrisme est difficile à trouver chez les africains.

La perforation de la voûte palatine et la destruction du septum nasal sont fréquentes dans la syphilis. On peut confondre les lésions ulcéreuses aux jambes et aux organes génitaux avec les «boubas». La neuro-syphilis est rare — mais CAROTHERS (1940) a eu l'occasion de voir quelques cas de méningo-encéphalite syphilitique et de paralysie générale.

Les ostéites du tibia sont plus fréquents dans les cas de syphilis.

Syphilis congénitale

Les enfants atteints de syphilis congénitale ne réussissent pas à vivre au-delà des 3 ou 6 mois. Chez ceux qui survivent les symptômes classiques de la syphilis se produisent bientôt — mais à ce stade il est très difficile à savoir s'il s'agit d'un cas de syphilis ou de «boubas».

Thérapeutique

La pénicilline est une des meilleures drogues pour guérir les atteints de syphilis. On connaît plusieurs laboratoires préparant la pénicilline. L'application de la pénicilline dans le traitement de la syphilis ou des «boubas» donne de très bons résultats.

SUMMARY

Syphilis is easily cured with penicillin but the complete eradication of the disease has not yet been achieved. In 1961, WATT reported that venereal disease had increased in the adolescent population in 1960 in Great Britain. In 1945, in Kenya, DE MELLO reported that syphilis in African peoples was not as common as some authors had reported. Yaws (framboesia) and syphilis are so similar in appearance that a differential diagnosis is quite difficult.

Yaws and syphilis

REFERENCES

Syphilis is considered to have originated in America. According to some syphilologists, syphilis was introduced in Spain in 1493 and 1494 by Columbus's crew, who had brought the disease from Haiti.

GORDON (Kenya) thinks that the Portuguese, who sailed to Africa 40 years before Columbus discovered America, may have contracted yaws and that, accordingly, they may have transmitted the disease to the populations of Ceylon and other eastern countries. GUNAWARDENA (1946) reports that *parangi* is not a venereal disease and that it was introduced by the Portuguese in the island of Ceylon. Is *parangi* yaws? Both *Treponema pertenue* and *Treponema pallidum* show the same serological reactions and respond to the same treatment. Accordingly, in Africa, there is some difficulty in distinguishing between yaws and syphilis. DAVIES (1947) criticized LAMBKIN and KEANE for having failed to diagnose yaws, dominant in Uganda. Because of this, researchers in Uganda reported that 80% of the African population were syphilitic.

Symptoms

Multiple lesions in Africans are common, as shown by the photographs. The syphilitic ulcer affects the inguinal glands, while yaws does not. In Africa, it is difficult to diagnose between yaws and syphilis.

Secondary stage syphilis may affect the tongue, the palate, the vulva, the breast, etc. Cardio-vascular symptoms are common in Africans but not all may be attributed to syphilis since in many cases they are due to rheumatism. Aneurysm is seldom noticed in Africans.

Perforation of the palate and destruction of the nasal septum is common in syphilis. The ulcers on the legs and genitalia may be confused with yaws. Neurosyphilis is rare, but CAROTHERS (1940) reported some cases of syphilitic meningoencephalitis and dementia paralytica (general paralysis of insane).

Osteitis of the tibia is quite common in syphilis.

Congenital syphilis

Infants with congenital syphilis generally do not live more than 3 to 6 months. The ones who survive show the classic symptoms of syphilis, but by then it is very difficult to ascertain whether it is a case of yaws or of syphilis.

Therapy

Penicillin is one of the better drugs for the treatment of syphilis. It is being manufactured widely and its use shows very good results in the treatment of yaws and syphilis.

1. ANDERSON, G. V. W. — «East African standard», *Rotary Talk*, Nairobi, 26th, July, 1942.
2. BURTON, A. W. — *S. African Medical Journal*, 8, 327, 1934.
3. COOK, Sir Albert. — «The medical history of Uganda», *The East African Medical Journal*, July 1936, vol. XIII, n.º 4, p. 99.
4. CAROTHERS, J. C. D. — «Some speculations on insanity in Africans, and in general», *The East African Medical Journal*, June, 1940, vol. XVIII, n.º 3, p. 95.
5. DAVIES, I. N. P. — «Pathology of Central African natives. Mulago Hospital Post Mortem Studies V», *East African Medical Journal*, 24, p. 437, 1947.
6. DE MELLO, J. P. — «Syphilis in the African», *The Medical Bulletin*, Bombay, vol. XII, n.º 15, August 1945, pp. 129-130.
7. DE MELLO, J. — *The East African Medical Journal*, vol. XXV, n.º 1, Jan., 1948.
8. GORDON, H. L. — «Yaws and syphilis», *East African Medical Journal*, p. 221, 1935.
9. GUNAWARDENA, H. C. P. — «Answers to some questions on V. D.», *Ceylon Health News*, vol. XII, n.º 3, January-June, p. 2, 1946.
10. HUDSON, E. H. — «Syphilis in the Euphratic Arab.», *American Journal of Syphilis*, XVI, p. 447, 1932.
11. HEIMAN, H. L. — *South African Medical Journal*, 10, 215, 1936.
12. HEIMANN, H. L., STRACHEN, A. S., and HEYMAN, S. C. — *British Medical Journal*, 1, 344, 1929.
13. HARRISON, L. W. — «Urogenital diseases. Venereal», *The British Encyclopædia of Medical Practice, Surveys and Abstracts*, p. 153, 1939.
14. KERN, Arthur B. — «*Treponema pallidum* immobilization test in the evaluation of patients with positive serologic tests for syphilis», *The New England Journal of Medicine*, vol. 251, n.º 20, Nov. 11th, p. 807, 1954.
15. MICHAEL-SHAW, M. — *Child Health Practitioner*, July, 1945.
16. MUWAZI, E. M. K., TROWELL, H. C., HENNESSY, R. S. F. — «Liver diseases and jaundice in natives of Uganda», *E. A. Medical Journal*, May, vol. XIX, n.º 2, p. 53, 1942.
17. NICOL, C. S. — «The recrudescence of venereal disease», *British Medical Journal*, Feb. 18th, p. 445, 1961.
18. *Report of Jamaica Yaws Commission*, p. 27, 1932.
19. SEQUEIRO, James H. — «Venereal disease in the Great War and after», *East African Medical Journal*, vol. XVI, n.º 9, Dez., 1939.
20. STANNUS, H. S. — «Yaws-Syphilis», Tropical Disease Bureau, Reviewed by J. H. SEQUEIRA, *The East African Medical Journal*, May, vol. XIII, n.º 2, pp. 54-55, 1936.
21. WILLIAMS, A. W. — «Heart disease in the native population of Uganda», *The East African Medical Journal*, Dec., vol. XV, n.º 7, p. 279, 1938.
22. WATT LESLIE — «Venereal disease in adolescents», *The British Medical Journal*, Sept. 30th, p. 859, 1961.
23. WILKINSON, A. E. — *British Medical Journal*, vol. 30, 144, 1954.

