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SURVEY OF VENEREAL DISEASES IN AFGHANISTAN *

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General Background

Afghanistan has rugged mountains in the north-east and deserts in the south-west. It is separated from Pakistan by mountains, the chief routes of communication by road being through the Khyber Pass from Peshawar to Kabul and through another pass from Quetta to Kandahar. There is communication by road into Iran from Farah and Herat, but the cities of Neh and Meshed, to which the roads lead, are far from railheads. From Herat and Mazar-i-Sharif there are roads to railheads in USSR. However, for various reasons, the chief route of import and export is through Pakistan, via Peshawar or Quetta, where railheads give access to the rail system of Pakistan and to the chief seaport, Karachi. There are no railroads in Afghanistan, so all transport must be by automobile or animal and over difficult roads, none of which is paved.

The country is very fertile wherever water is available and is completely agricultural in economy. Areas such as those near Herat and Kandahar are famed for the productivity of their orchards and wheat-fields. There is enough wheat grown in normal years to supply the needs of the country. Sugar is produced in almost sufficient quantities. Fruit, particularly in dried form, was, in the past, an export crop of importance to India and Pakistan. Of the animals raised, sheep are the most important.

There is at present a moderate programme of irrigation work and road-building in progress, under the direction of foreign workers equipped with the most modern earth-working machinery. These projects are completely financed by the Government on a long-term basis and are reported to promise a greater food output. The forests of the country are being rapidly depleted, it is stated, to provide fuel and building material.

The country is now suffering from several handicaps. A fall in the price of karakul fur, the only source of dollars, has reduced the income. At the same time, there is an increasing need for dollar exchange to provide payment for machinery and other capital equipment, as well as for large amounts of consumer goods that must be purchased abroad.

The population of Kabul, Kandahar, Herat, and Mazar-i-Sharif is estimated at about 50,000 for each city ; the total population of the country

* At the request of the Ministry of Public Health of Afghanistan for assistance in the control of venereal diseases, Dr J. C. Cutler visited the country from 25 May to 12 June 1949.

is estimated at about 12,000,000. Census data are not available. The majority of the people live in towns and villages or are migrant. Large numbers of the population leave the cold areas, with their flocks, during severe winter months to migrate to the warmer climate of Pakistan, returning to Afghanistan in the spring.

No figures exist concerning the literacy of the people, but its level is low. The Government is making a real effort to raise the educational level of the people. Education is free to all who can be accommodated and begins at the age of six or seven. There are several large schools of 2,000 to 3,000 students in Kabul and smaller ones in other cities and towns. Numerous schools are in the process of construction, but there is still a very large deficit. Educational personnel from England, France, and the USA have been engaged by the Government and are now at work throughout the country.

The university at present consists of four colleges—arts, sciences, law, and medicine—with a total enrolment of about 400 students distributed more or less equally among the four divisions. Admission to the university is based upon recommendation of the instructors of the secondary schools, who select from among those who have completed twelve years of training the ones whom they consider best fit to enter each of the four colleges. Advanced education is free, as is the earlier instruction. University students are provided with food, lodging, clothing, books, equipment, and spending money.

Medical Survey

Educational facilities

The medical college occupies a new, modern, very well-designed building with a hospital unit, situated at Aliabad, just outside Kabul proper. The course consists of six years, of which five are of instruction and the last corresponds to internship. The medical school was organized fifteen years ago ; the first class of ten graduated ten years ago. Since then about ten men per year have graduated. This means that in the country there are now about one hundred graduates, plus another four or five Afghans trained in Europe or the USA. In addition, there are practising the foreign members of the medical faculty together with three or four other foreign physicians.

There are seventeen chairs in the medical school. Through an arrangement with the Governments of France and Turkey, thirteen of the chairs are to be filled by French and four by Turkish professors, with the respective governments paying half the salary of each of its nationals while the Government of Afghanistan pays the balance of the salary. There are at present one Turkish and four French professors giving the instruction with the aid of some Afghan physicians.

As a consequence of religious objections, it is impossible to do any human dissection in the medical school or to do any autopsy studies. At one time the students were sent to medical schools in India for anatomy, and attempts are being made to re-establish this practice. But at present anatomy is taught from charts, drawings, and prepared specimens. There is laboratory equipment for student use or demonstration in the other sciences. It seems that the amount of equipment available is limited and that, while money is at hand to purchase both new supplies and replacements, there is a time-lag of six to twelve months between placing an order and receipt of the material on account of slowness of transportation. The lack of a few ounces of a simple chemical reagent or of a minor part of a piece of equipment which cannot be made or repaired locally may require months to rectify, during which time certain tests cannot be performed or equipment is inoperative.

The library of the medical school appeared, on cursory examination, to be excellent. The journal collection was almost exclusively French and represented all branches of medicine. The collection of books, in French, German, and English, appeared to contain a well-chosen group of standard reference works and texts as well as a large section of very recent English and American works. All students admitted to the medical school have a reading and speaking knowledge of French, English, or German ; the lectures are delivered in the native tongue of the professor and translated for the class by an interpreter. A few texts have been translated into Persian for use in the school.

It is stated that the average physician receives no foreign journal and buys few foreign books. The costs are prohibitive in relation to the income. However, the Ministry of Public Health publishes a monthly journal entitled *Roghtia* (Health) in which abstracts from the foreign journals received by the Ministry appear, along with writings from the medical profession of the country.

There is a training school for assistant physicians from which about one hundred are said to have graduated. The student enters this institution after six or seven years of schooling and spends three in training. Upon completion he may have full responsibility in one of the smaller clinics in the villages, may aid the physicians in other units, or may do the laboratory work in a hospital.

There are a few men and women trained as medical attendants (nurses), but candidates for training for such posts are reputedly difficult to find.

Since the medical education is provided by the State, all physicians are employed by the Government during the working day to staff the offices of the Ministry of Public Health, the hospitals, and the clinics, in which treatment is provided essentially without cost. The salaries paid are low with respect to the cost of living, so that almost all physicians have their own offices in which they engage in private practice in the evening.

Laboratory facilities

In Kabul there is the Central Bacteriological Laboratory in a large building designed for the purpose and with what appears to be a fair amount of fundamental equipment in the form of gasoline-heated autoclaves, still, incubators, refrigerators, microscopes, etc. There is a serious shortage of glassware and reagents. For instance, to do the 150 Kahn tests usually performed per week, the bottoms of arsphenamine ampoules are used as test-tubes, for the laboratory now has no proper Kahn tubes. The laboratory makes cholera, typhoid, rabies, and smallpox vaccines in addition to performing Kahn tests and routine blood, urine, stool and certain bacteriological culture examinations for the hospitals and the Ministry of Public Health in Kabul. The impression was that scrupulous attention had been given to keeping the building and the equipment in working order and clean but that there was a serious handicap in the difficulties encountered in procuring supplies and equipment.

Throughout the country, the equipment of both hospitals and laboratories is extremely meagre. For instance, the first dark-field microscope arrived in the country three months ago. In the hospitals of Herat and Kandahar, microscopes are available, with minimal equipment for blood counts, stool and urine examinations, and for staining of blood and other films for some diagnoses. A mission has left the country recently to purchase laboratory and other hospital equipment, and it is the stated plan of the Ministry of Public Health to strengthen the hospital services as rapidly as possible.

Sanitary conditions

It would appear that there is no modern arrangement for sewage disposal in any of the towns. Thus there are many opportunities for contamination of underground and surface water-supplies which are used for cooking, drinking, and irrigation. Very few screens for fly protection exist, and flies were noticed to be superabundant.

Prevalent diseases

Diarrhoeal diseases of the newborn and of children are reported to be very common, as are typhoid and cholera of the intestinal group of diseases. Typhus fever is endemic. Trachoma presents a problem. Anthrax is commonly seen in the workers of the large hide industry. Malaria, which is a serious problem and causes economic losses, is now the subject of investigation by a WHO team. The incidence of smallpox is indicated by the relatively large number of pock-marked faces seen. Tropical ulcer (*Leishmania tropica* infection) is so common that it is estimated that 30% to 50% of children in some parts of the country are infected. Tuberculosis is reported to be a serious problem. (In Kabul there is a very well-equipped and well-run thirty-bed hospital for tuberculous women and children.)

Of the skin diseases, fungus infections of the scalp are so common as to present a real problem among schoolchildren. Impetigo and pyodermia are prevalent.

Undernourishment and vitamin deficiencies are reported to present a serious problem. Fruit and vegetables are available only in season ; the price of meat is said to be so high that the consumption is low. In winter the diet of the average person is said to consist of whole-wheat bread, potatoes, turnips, and onions, with only occasional meat.

Table I shows the results of a medical inspection of a small, supposedly representative, sample of schoolchildren. The examination was a cursory one of inspection and palpation without completely undressing the children.

TABLE I. MEDICAL INSPECTION OF 126 SCHOOLCHILDREN AGED 6-7 AND 15-21 IN KABUL AND HERAT

	Kabul	Herat	Herat
	76 children First Grade Age 6-7	36 children First Grade Age 6-7	14 children Seventh Grade Age 15-21
Anaemia	26	18	4
Pot belly	33	24	2
Hutchinson's teeth	0	4	0
Sabre shins	0	1	0
Mucous patches in mouth	0	5	1
Saddle nose, perforation of septum	0	1	0
Poor skin hygiene	15	6	0
Smallpox scars	1	3	1
Scabies	3	4	0
Vitamin deficiencies	33	21	7
Poor dental hygiene	9	4	0
Tuberculosis of skin	0	1	0
Trachoma	21	7	2
Leishmaniasis scars	Not recorded	8	8
Fungus infection of scalp	14	15	1
No visible signs of disease	10	2	2

Anaemia was diagnosed on the basis of conjunctival pallor ; and vitamin deficiency on the basis of dry, scaly skin, smoothness of tongue, or hypertrophy and redness of the gums. Hutchinson's teeth, sabre shins, mucous patches in mouth, and saddle nose and perforation of septum were found in six children, but diagnosis of syphilis was not confirmed by serological tests and consequently is subject to error. While the sample is small and may not be representative, the findings are at least suggestive.

Venereal-Disease Survey

Diagnostic facilities

The only serological tests for syphilis performed in Afghanistan are carried out at Kabul. The antigen used is made in the laboratory, and only qualitative tests are performed. The laboratory has very limited

supplies of absolute alcohol, reagent sodium chloride, and other chemicals necessary to prepare and use the Kahn antigen. Reports from physicians indicate that there is much fluctuation of results on the blood from the same patient from week to week.

In the teaching hospital, the professor of dermato-syphilology now has a dark-field microscope for use, but nowhere else in the country are facilities available for dark-field or serological diagnosis. In some institutions, stains are available for diagnosis of urethral smears. It is evident that diagnosis—including differential diagnosis—of venereal disease rests almost entirely upon clinical judgement and is consequently subject to error.

Method of treatment

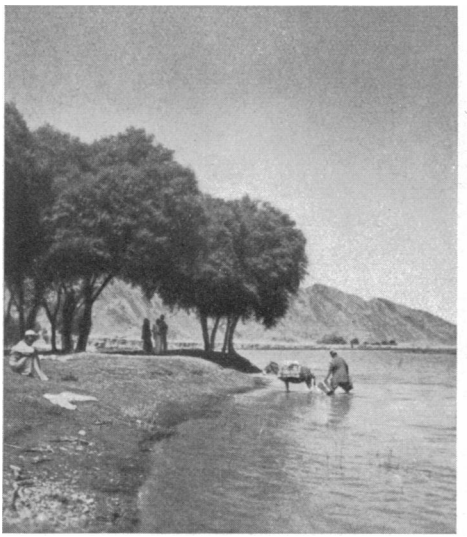
The schedule of treatment taught and used throughout the country is the interrupted method consisting of a course of six to eight weekly injections of an arsenical—arsphenamine, neoarsphenamine, or a mapharside—and bismuth, followed by a rest period. Three courses per year are recommended, and three years of such treatment are considered necessary for cure. Almost all of the hospitalized patients complete only one course of treatment since they are discharged after one course and seldom return.

In the past, bismuth and the less expensive arsenical preparations have been furnished free, while charges have been made for the more expensive preparations ; but now the policy of the Ministry of Public Health is to furnish all antisyphilitic drugs free of charge. Sufficient drug supplies for about 4,000 courses of treatment remain in the stores of the Ministry at present.

Survey observations

According to data given on 5,000 admissions to the Polyclinic Hospital of Kabul during 1948, about half of the persons admitted were diagnosed as having early or late symptomatic syphilis, either as the presenting complaint or as a complication of the presenting disease. In Aliabad Hospital, the 300-bed teaching unit, there are beds for 31 male and for 9 female dermatological and syphilological cases, of which 75% to 80% of the males and almost all of the females are syphilitic patients. At the time of this survey, 21 of the male patients were clinically diagnosed syphilitic cases and were receiving chemotherapy. Four patients showed lesions of primary and secondary syphilis ; several 12- to 14-year-old children showed stigmata of congenital syphilis ; and others showed perforation and destruction of nasal bones or of the hard or soft palate, or osseous or cutaneous lesions clinically late luetic. The professor had, in the past, used a very small amount of penicillin in beeswax and peanut oil but had been unable to follow up the treated patients.

FIG. 1-4. WHO SURVEY IN AFGHANISTAN



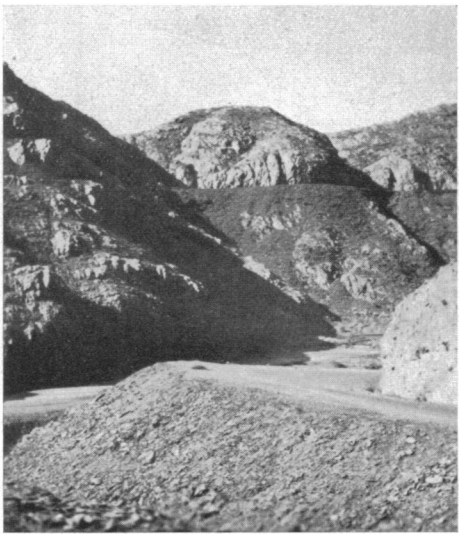


Fig. 1 and 2. Typical Afghanistan landscapes

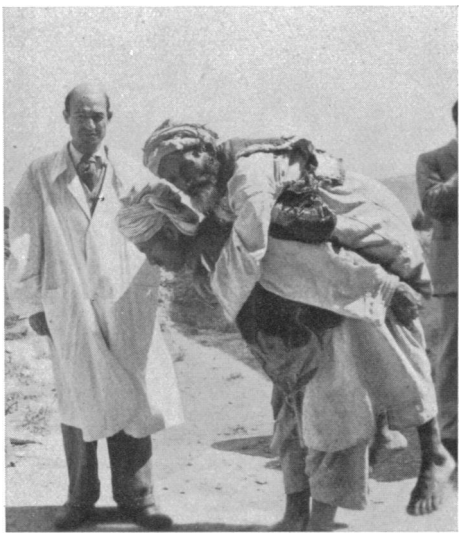


Fig. 3. Patient being brought to hospital at Herat

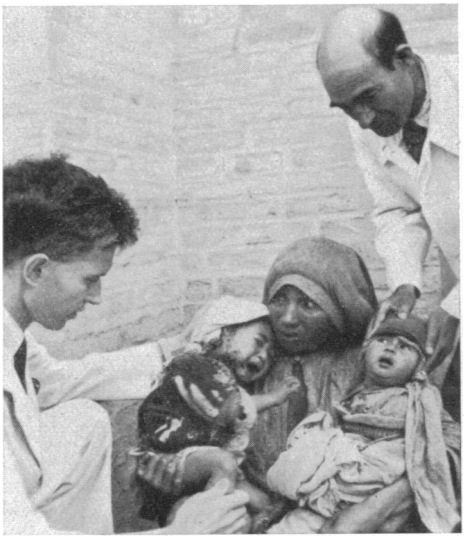
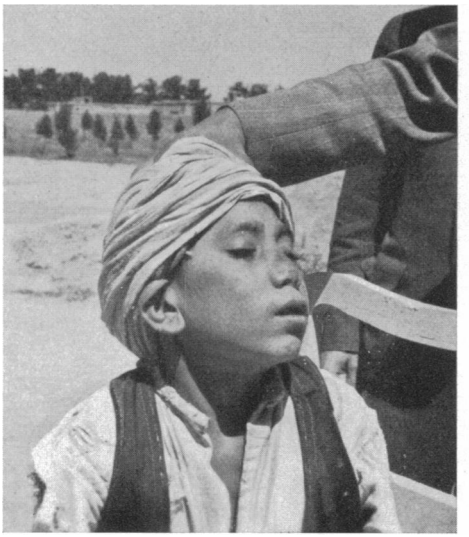


Fig. 4. Mother and two infants with pyodermia

FIG. 5-8. WHO SURVEY IN AFGHANISTAN



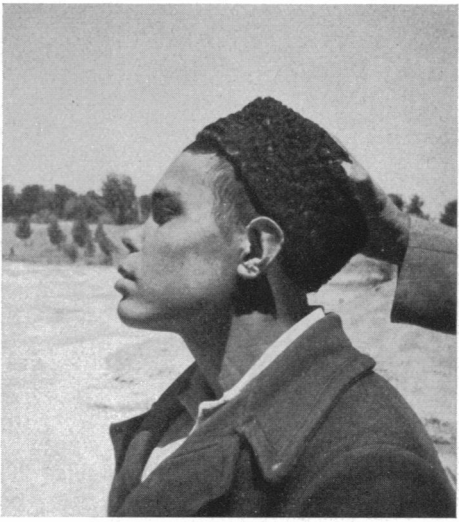


Fig. 5 and 6. Congenital syphilis (saddle-nose deformity)

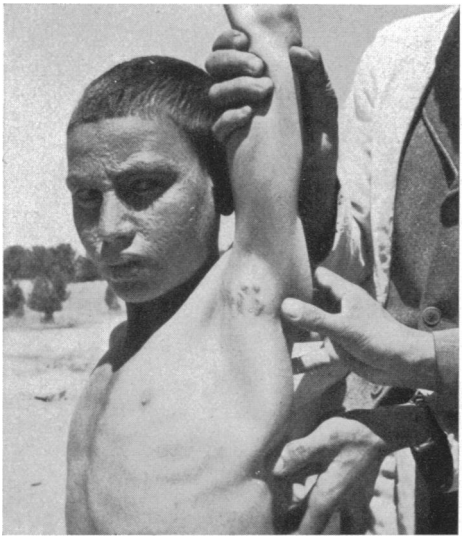


Fig. 7. Condylomata lata of secondary syphilis in axilla

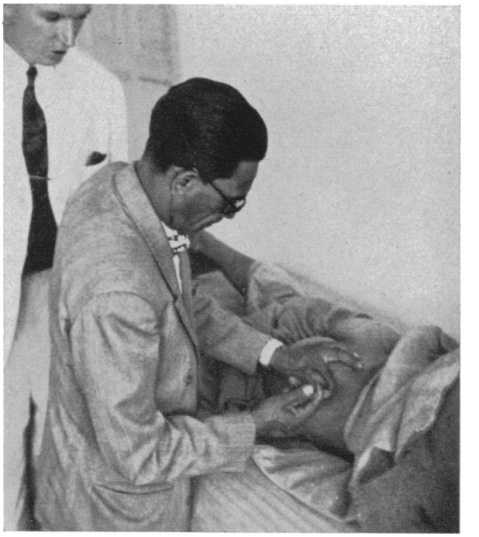


Fig. 8. First use in Afghanistan of penicillin in treatment of syphilis

FIG. 9-12. WHO SURVEY IN AFGHANISTAN

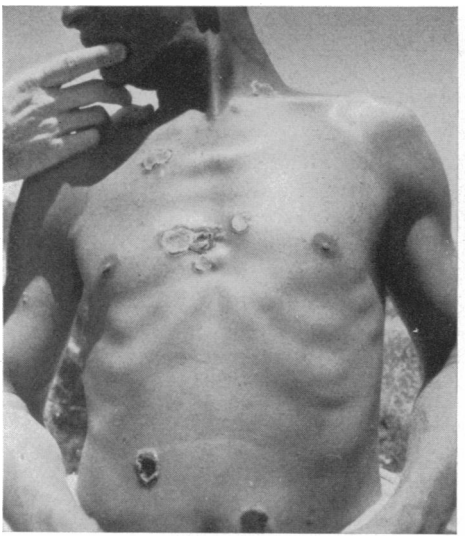


Fig. 9 and 10. Circinate annulo-papular syphilide

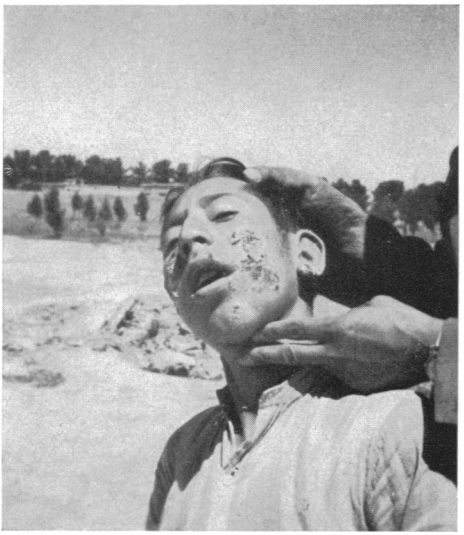


Fig. 11. Tuberculosis of skin

Fig. 12. Lupus erythematosus

FIG. 13-16. WHO SURVEY IN AFGHANISTAN

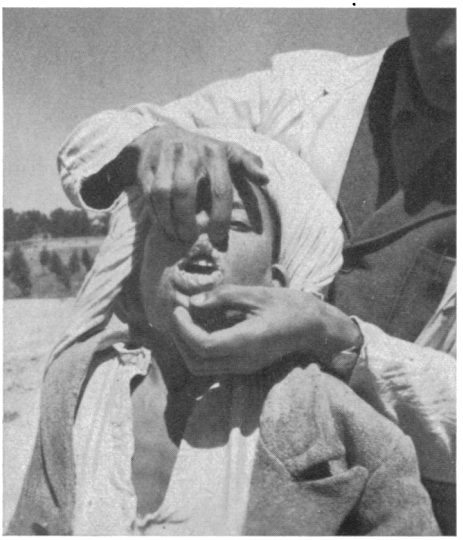


Fig. 13. Mucous patches of syphilis

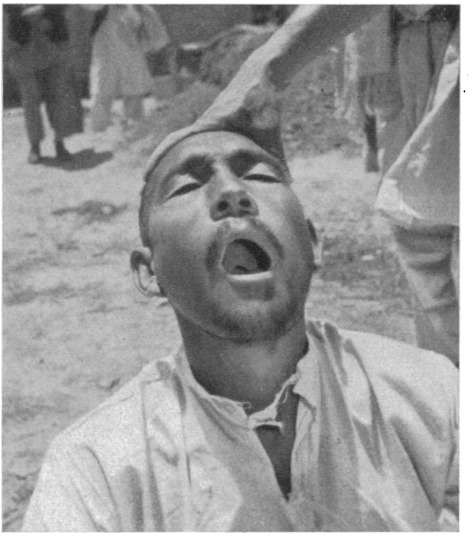


Fig. 14. Gumma of palate

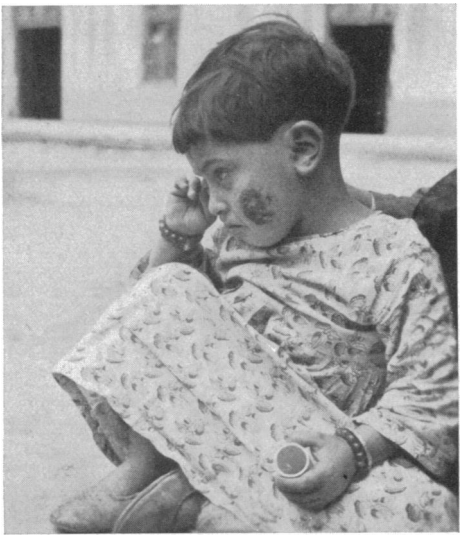


Fig. 15. Cutaneous leishmaniasis

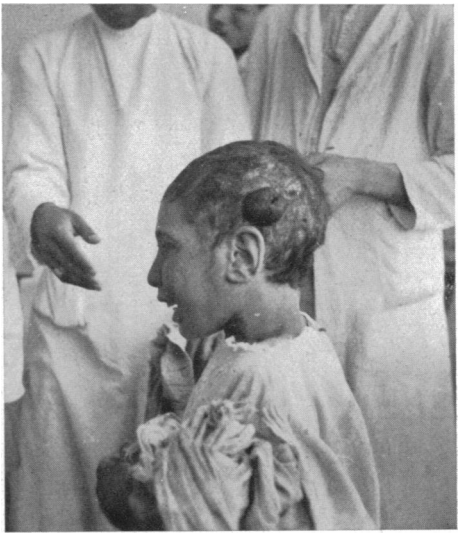


Fig. 16. Fungus infection of scalp and kerion

At Kandahar there is a 20-bed hospital for men and a 10-bed one for women. It was reported that syphilis is frequently seen there.

Herat has a 30-bed hospital for men and a 10-bed hospital for women staffed by six physicians, a midwife, and attendants. The dermato-syphilologist of Herat had been there four months and during that time had seen about 6,000 outpatients, of which about 500 were diagnosed as syphilitic. A random review of his case-record book revealed that of 600 female patients seen in two months 190 were diagnosed as syphilitic.

The following describes some of the patients present for the first time at the outpatient department on two different days :

(*a*) 14-year-old boy with perforation of palate and destruction of left side of nose ; probable congenital syphilis.

(*b*) 12-year-old boy with classical mucous patches of mouth, fissured labial commissures, condylomata lata, papular secondary syphilis of body and genitalia, and hoarseness, which was probably of syphilitic origin. The duration of the symptoms was six months, and the boy stated that three siblings and the parents had similar symptoms.

(*c*) Two children and one adult with lesions, apparently tuberculosis of the skin.

(*d*) Adult male with classical circinate secondary syphilis of four months' duration and history of chancre six months before admission.

(*e*) Two adult males with ulcero-papular eruptions of scrotum and penis, apparently secondary syphilis.

(*f*) One adult male with complete destruction of uvula and soft palate, possibly of syphilitic origin.

(*g*) One adult with mucous patches of mouth and tonsils.

(The last four did not give a history of chancre.)

A distribution of essentially similar cases was seen among female patients.

At a boys' boarding school at Herat, 60 of the 250 students (24%) were under treatment for syphilis, having come for examination showing mucous-membrane or cutaneous and genital lesions diagnosed as syphilis. It is possible that the spread of infection may have been a result of homosexual practices among the students aged 12 to 18. To illustrate the lack of equipment available to the physicians of the hospital giving weekly injections to this group of 60 students, it should be noted that only one 10-ml. syringe and one needle were available.

The patients appearing at the hospital in Herat come from the city or from the outlying towns and may have to walk twenty or more miles to present themselves. It is understood why, under these circumstances, it has been extremely difficult to carry out regular treatment of the patients

living so far from the clinic and why it has been almost impossible to treat contacts or family groups. A further complication is the custom of " purdah " and the reluctance on the part of many of the women to permit the physician even to look on or examine the face or skin, not to mention the genitalia, which makes it extremely difficult for the physician to work.

In spite of lack of medicine and equipment at the clinic at Herat, the physicians were helping the patients and had succeeded in inspiring a certain amount of confidence in the population, or at least a section of it. It seemed that the patients had faith and came because they needed help which they had not been able to obtain from the " Hakim " or herb doctor, who operates from shops in the bazaars and dispenses remedies used by a large percentage of the population.

General observations

To date it has been impossible to procure any written data on the medical history of Afghanistan. However, since this country was on the route of conquest into India and on the course of the most important ancient trade routes from the Orient to the Mediterranean, it is probable that various venereal diseases must have been spread throughout the country at an early date.

The Moslem religion teaches continence before marriage and faithfulness within the marriage bond and does not permit prostitution. The observance of the religion is very strict in Afghanistan. There is no organized prostitution, and clandestine prostitution is said to be practised on a very limited scale. However, among the unmarried, contact with servant girls is said to be not infrequent and a source of infection. Likewise, the traders and migrant population are blamed for much of the spread of venereal disease within the country.

Reports and observations of secondary syphilis in young children suggest that there may be some degree of similarity between the syphilis observed in Afghanistan and that of Bosnia and Herzegovina. In both areas there is a Moslem population with families living under conditions of poverty and proximity, using common eating utensils, etc., so that there is an opportunity for non-sexual transmission of venereal disease. However, the fact that genital ulcers, possibly syphilitic, are said to be frequent lends support to the theory of sexual transmission also.

It was stated that suppurative inguinal adenitis is very rarely seen. Nothing is known concerning the occurrence of the late sequelae of granuloma inguinale or lymphogranuloma venereum in the female, as it is not possible to examine the women. On clinical grounds, in the male it seems that chancroid and lymphogranuloma venereum are relatively uncommon, as the accompanying adenitis is seldom observed. However, careful surveys are needed before any more than a guess as to relative prevalence of the diseases can be given.

A discussion of venereal disease in the female would be incomplete without reference to sterility, abortion, and congenital syphilis. No statistics exist regarding birth-rates, neonatal and infant mortality-rates, etc., but various physicians estimate that the infant mortality-rate is between 40% and 50%. In general, the families of the lower classes are not large. Repeated abortions and sterility are a very real problem, but no knowledge of the causes is available on account of the inability to examine the women. It was reported by one physician of very large experience that the woman may have from fifteen to twenty pregnancies during her childbearing life, one pregnancy per year, and will end with only one or two living children owing to abortion, miscarriage, and high infant and child mortality-rates. In the space of several hours in which the physician questioned a number of the older women seen in the female surgical outpatient clinic, histories of ten to twenty pregnancies with one to ten living children were given. The most striking of this group was a woman of about 55 years who had had twenty pregnancies without a single surviving child. Any attempt to estimate the role of syphilis and gonorrhoea in this connexion would be sheer guesswork. However, children showing obvious stigmata of congenital syphilis were seen.

Summary and Proposal for WHO Action

As an introductory remark, the statement should be made that it is not believed that there will be any lasting value from a WHO-sponsored anti-venereal-disease programme unless it is possible to link the programme to a scheme for aiding the country to raise the general standard of medical and public-health aid. It has been pointed out that no vital statistics exist for the country ; as yet no machinery for collection is available, although a plan is under consideration. There is no instruction in general public health, and only a few of the physicians have a public-health concept of medicine. There is a lack of even the most elementary equipment and supplies for diagnosis, laboratory work, and treatment. (For example, rubber gloves are so expensive and hard to procure that it is reported that only two physicians in the country use them, purchasing their own.) A determined effort is being made to overcome these handicaps, but outside aid is needed. The problem of the Ministry of Public Health was very succinctly put by one physician : " We have little money to work with internally and we do not have enough dollars to buy outside ; we need the help of WHO. "

Discussions with various members of the Ministry of Public Health resulted in the following suggested general plan of work for an anti-venereal-disease demonstration team :

1. Establishment of a laboratory in Kabul from which an accurate survey of the venereal-disease incidence in the city could be made and in

which comparison of the standard tests could be made so as to select the simplest one, compatible with a fair degree of accuracy, for use throughout the country.

2. Establishment of diagnostic services in the hospitals and clinics of Kabul, attention being given especially to the teaching hospital.

3. Establishment of a penicillin-treatment programme in Kabul, with emphasis on a good demonstration in the medical school and teaching hospital. Since there has not existed in the past any accurate means of diagnosis or follow-up by which effectiveness of even chemotherapy could be assessed in the country, since the judgement of the physicians there is based solely upon what they have read and have been taught, and since any follow-up programme will be both costly and difficult, the team should emphasize treatment, relegating follow-up to a minor position. Proof of results of treatment can be obtained from other areas, and the time of the team members can be much better spent on case-finding, treating, and teaching.

4. Establishment of the simplest serological laboratories, and strengthening the routine diagnostic laboratories in the other hospitals of the country, staffing them with technicians trained by the group in Kabul.

5. Establishment of a routine treatment of venereal disease based upon accurate diagnosis, free and rapid treatment, according to directive of the Ministry of Public Health, based upon latest knowledge and worked out in co-operation with the demonstration team.

6. Travel by the staff to aid in establishment and maintenance of laboratory and treatment facilities and to survey accurately the venereal-disease rates.

7. Establishment of a uniform and satisfactory policy of teaching and training in venereology both in the medical school and among the graduate physicians, through co-operation of the Ministries of Public Health and Education and of the WHO team.

8. Aid by WHO in the form of a team to strengthen the public-health programme of the Ministry, in teaching public health in the medical school, and in teaching laboratory technicians the latest advances in the routine simple diagnostic tests.

In order to carry out such a programme, the team should be very carefully selected so as to secure physician, laboratory technician, and nurse who have a good background in public-health work and whose background includes a much more comprehensive experience than that in venereal disease alone.

In view of the foregoing discussion, the question may be raised as to the possibility of concrete accomplishment by a demonstration team. It

is possible that the reluctance of the people to come for medical treatment is based in part upon lack of knowledge of what modern medicine can offer. The present methods of treatment of venereal diseases with antibiotics and sulfonamides alone are completely specific; the time interval between application of therapeutic agent and relief of symptoms with healing of lesions is so short that the relationship between cause and effect can be easily appreciated. A demonstration to the people, through venereal-disease therapy, of the benefits of modern medicine should help to prepare them to accept other necessary medical services such as mass immunization, medical services for women, etc., and should help to break the hold of superstition on the population.

Since the benefits resulting from the work of the malaria team will be just as striking, and since there can profitably be sharing of some equipment and collaboration of teams, there should be very close co-operation in the planning and execution of the programmes.

Finally, the successful completion of such a programme on the part of one or both teams requires educational work to be carried on throughout the programme, in the medical school and within the medical profession. It would serve to orient the physicians of the country towards a public-health approach to the medical problems of their land.

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