

## CORRESPONDENCE

*This department is provided for the publication of informal communications which are of interest because they are informative or stimulating, and for the discussion of controversial matters.*

### SYMPOSIUM

#### SARCOIDOSIS IN THE TROPICS

As explained in an editorial note in this issue, a statement by James and Jopling to the effect that there is evidence that sarcoidosis is relatively common in colored races, and it is therefore of particular interest in the tropics, led to an inquiry by questionnaire about its validity. The replies received follow.

*From Dr. José N. Rodriguez, Manila, Philippines.*—The statement is interesting, but not universally true.

Experience in the outpatient clinic of the Leprosy Research and Training Center, Manila, does not support this view, at least so far as the cutaneous lesions of sarcoidosis among Filipinos is concerned. The great majority of our patients naturally are Filipinos, with a sprinkling of Chinese and Hindus. Of 41,000 cases of skin diseases (other than leprosy) seen and treated, mostly by reasonably experienced dermatologists, in this clinic during 1960 and 1961 no case of sarcoidosis with skin manifestations was diagnosed. It may be stated in this connection that it is the usual practice to biopsy interesting skin lesions among patients examined.

It is true that some cases of the tuberculoid type of leprosy in reaction were seen which showed lesions which might have been mistaken for Boeck's sarcoid. One patient showed no cutaneous lesions other than a line of 3 deeply-situated oval nodules on the arm which might be mistaken for the type of sarcoid described by Darier and Roussy. The histology, however, was that of tuberculoid leprosy, with involvement of the nerves in the dermis or in the hypoderm.

On search, I have found two reports of supposed sarcoidosis without skin lesions—or, for that matter, without proved lung lesions—published in the Philippines in 1953 and 1954, and have learned of a third paper read at a meeting in 1947 but not published. Superficial lymph-node involvement seems to have predominated.

Obviously the writers you cited had in mind the prominent skin lesions sometimes accompanying sarcoidosis among Negroes which they may have observed in tropical regions in Africa and other countries peopled chiefly by this race. In such cases, biopsy would obviously be necessary to eliminate leprosy.

*From Dr. Harry L. Arnold, Jr., Honolulu, Hawaii.*—Sarcoidosis is not known to have ever occurred in people born in Hawaii or in long-time residents here. This has most recently been discussed by Donald

W. Brown, with documentation [Sarcoidosis in Hawaii: why doesn't it occur? *Hawaii Medical Journal* **21** (1961) 33-35].

On the other hand it occurs in New Zealand. These two island groups, neither of which is actually "tropical" (although Hawaii is technically just within the tropical zone) are in many respects similar. A comparison of the prevalence of the disease among the whites and Maoris in New Zealand might be enlightening.

The reference cited in your inquiry may perhaps be to the frequent occurrence of the so-called noncaseating tuberculosis, which in the Negroes in the United States apparently was, and is, sarcoidosis. This, I think, is far more common in the inclement North than in the subtropical South.

It is recalled that Reenstierna once remarked that sarcoidosis would as a rule be very uncommon in areas where leprosy is endemic.

*From Dr. Dharmendra, Central Leprosy Institute, Chingleput, South India.*—My impression is that sarcoidosis is not frequent in India. Moreover, I have made enquiries from some friends who are likely to know more about this matter, and am told that this condition is not seen very frequently in India. Therefore I am not in a position to endorse the view that "sarcoidosis is relatively common in colored races, and is therefore of particular interest in the tropics."

*From Dr. R. V. Wardekar, Wardha, India.*—I am sorry that I am unable to contribute anything about sarcoidosis in India. However, I am passing the inquiry to dermatologist friends in Bombay, and I will let you know if I hear from them. [Apparently the Bombay dermatologists were also unable to contribute, for nothing more has been heard of the matter.]

*From Dr. N. Mukerjee, Calcutta, India.*—I do not think that sarcoidosis is at all common in this region, which is just inside the tropical zone. During the whole period of existence of the Leprosy Outpatient Department of the School of Tropical Medicine here, which was opened over forty years ago (1920), during which period not less than 60,000 patients have been examined, probably not a single case of sarcoidosis has been referred by mistake for diagnosis. The experience of the Dermatology Department of the School, where several thousands of skin cases are examined annually, is about the same.

Simons, in his *Handbook of Tropical Dermatology* (Vol. 1, pp. 594-595), says that sarcoidosis seldom affects the inhabitants of tropical areas. Lahiri, in his *Treatise on Tropical Skin Diseases*, says that the disease is found in 0.1% of the patients in tropical practice. In a recent article by Vasavada and associates [*Indian J. Med. Sci.* **16** (1962) 149-154], in which a case is reported, it is stated that sarcoidosis is a relatively rare disease in India.

*From Dr. J. A. Kinnear Brown, Entebbe, Uganda.*—I cannot recall seeing a case of sarcoidosis in Uganda, where I have conducted many

surveys for leprosy over the years, or in southern Nigeria where I previously worked. That does not mean that they do not occur, but they certainly cannot be common. When in London the last time I was on leave I went especially to the sarcoidosis clinic of one of the hospitals there to see if that would make me more alert to the diagnosis of the condition. I have not seen it, however, nor has it been reported to me.

*From Dr. A. G. Shaper, Kampala, Uganda.*—It is very difficult indeed to give a categorical answer to whether or not sarcoidosis is relatively common or relatively rare in Uganda.

I have made inquiries in several of the departments of the Mulago Hospital here. The *radiologist* says that he has many times made a differential diagnosis of sarcoidosis, but has never had a proved case. In several suspicious cases he has x-rayed the hands as well as the chest and found no bony changes. The *clinicians* (internal medicine) are faced with such a heavy incidence of tuberculosis in its various forms that they too are unwilling to state definitely that they have seen an established case of sarcoidosis. The *pediatrician* states definitely that he has not seen a case in his wards in the last two years. The *pathologists* frequently receive specimens to which they attach sarcoidosis in their list of the possible diagnoses, but they again are unwilling to state that any of these had been confirmed by associated clinical and radiological findings.

You will notice my reluctance to be more definite on this question, as such statements have an unhappy knack of creeping into print and becoming established as fact. I would be grateful if you would regard the above replies as noncommittal, as I feel that, although there may well be sarcoidosis in this area, the level of diagnostic ability and facilities may not be equal to giving a definite assessment to the situation.

*From Dr. S. G. Browne, Uzuakoli, Eastern Nigeria.*—The statement by James and Jopling that “the few surveys which have been carried out in communities of mixed races indicate that *the incidence of sarcoidosis is considerably higher in the coloured races*” (my italics) is apparently based on investigations carried out in the United States.

After twenty-six years’ experience in tropical Africa, in the Belgian Congo and Nigeria, I cannot substantiate this assertion. I have not diagnosed a single case of sarcoidosis during this period. In the Oriental Province of the Belgian Congo, where leprosy was hyperendemic, it is possible—but unlikely—that some cases diagnosed as leprosy may have been suffering from cutaneous sarcoidosis, and vice versa.

The skin lesions that might cause confusion in leprosy and sarcoidosis are fortunately distinguishable in most cases by the presence or absence of sensory impairment, even when there are no clinical abnor-

malities elsewhere. Bacteriology and histology are of no help in these cases. Lepromatous lesions do not tend to be confused with sarcoidosis.

In light-skinned subjects the differential diagnosis might be difficult on clinical grounds alone, particularly where the lesions resemble reactional tuberculoid lesions. Sarcoid-like lesions, as is well known, closely resembling tuberculoid leprosy, may result from widespread grazing of the skin (as in road accidents, or bomb explosions), with implantation of silica particles; from zirconium used in cosmetic preparations; from beryllium in industry, etc.; from pollens; from atypical mycobacteria, or *M. tuberculosis* of low virulence.

Of great interest, also, are the skin lesions in patients suffering from some varieties of borderline leprosy which, if they should occur in Caucasians from nonendemic areas, would be diagnosed as sarcoidosis. I have studied 11 such cases at Uzuakoli. Typically, the center of the face—nose, perinasal area, cheeks, upper lip, center of forehead—is involved by a single lesion, which is well-defined and slightly raised, with a violaceous tint, and which does not exhibit any sensory loss. Such plaques may be found, rarely, on the forearms, back, and elsewhere. Bacteriologically negative by standard methods of examination, they show a histologic structure that could be either sarcoid or tuberculoid leprosy in reaction. When accompanied by slight enlargement of the preauricular and submental glands, the clinical picture may be very confusing.

We have not done sufficient radiographic examinations of the hilar region to make any definite pronouncement concerning enlargement of the hilar glands in these subjects.

Some patients with widespread and severe lepromatous leprosy (and minimal nerve involvement, and no trophic lesions) show clear-cut areas of rarefaction in the small bones of the foot, appearing to extend from the medullary cavity. These recall the phalangeal cysts of sarcoidosis.

It is a matter of great interest, although not of surprise, that granulomatoses of very diverse etiology—mycobacterial, viral, protozoal, chemical and organic—may exhibit an overall similarity in their tissue reactions, which may be regarded as a general-pattern response to a nonspecific stimulus in certain subjects, viz., foreign-body giant cells, epithelioid and histiocytic mobilization, and lymphocytic infiltration, sometimes accompanied by caseation.

Thanks are due to Dr. S. E. Onwu, M.V.O., O.B.E., Director of Medical Services and Permanent Secretary, Ministry of Health, Eastern Nigeria, for permission to publish this letter.

*From Dr. R. Kooij, Groote Schuur Hospital, Cape Town, South Africa.*—It can be said that sarcoidosis is a rare disease in this region, but that when it occurs it usually does so in colored people. In the last three years here in Cape Town I have collected 3 patients with definite

sarcoidosis and 5 others who possibly have it. All were colored. This has also been found to be the rule by our physician, Dr. Jackson, who has a special interest in the disease.

That sarcoidosis occurs more frequently in colored than in white people may be due to the higher incidence of tuberculosis among the former, accepting my view that sarcoidosis is a syndrome which can be caused by the tubercle bacillus, the leprosy bacillus, etc., [*Dermatologica* **116** (1958) 1-27; **117** (1958) 336-354], in addition to which a racial (constitutional) factor must also be considered.

At Westfort Institution, in Pretoria, I saw a few patients with tuberculoid leprosy who previously had been diagnosed as sarcoidosis. One of our patients here greatly resembled tuberculoid leprosy, but no anesthesia could be detected. Another had lesions in the elbow and knee areas (after injury; silicates). Most of the cases, however, I believe are due to the tubercle bacillus.

*From Dr. J. Marshall, St. James, Cape Province, South Africa.*—Although South Africa is at best subtropical, we do see a lot of tropical Negroes among the mine workers. In my opinion sarcoidosis is not at all common in the African Negro.

I have seen only one case, myself, which I published in *Medicine Illustrated* 9 (1955) 101. The incidence among 2,000 skin cases seen in Pretoria was 0.15%, according to Shultz, Findlay and Scott [*South African Med. J.* (1962) in press]. A case was reported from Nigeria in one of the recent issues of the *Journal of Tropical Diseases*; my recollection is that the authors considered it rare enough to warrant publication.

I imagine that the English article that you mention may have got American colored people, who apparently get sarcoidosis frequently, mixed up with Africans. There is no doubt of the ability of tuberculoid leprosy to reproduce the clinical picture of sarcoidosis.

[B. van Lingen said that sarcoidosis in South Africa is a comparatively rare disease. Analysis of the records of the five teaching hospitals in the country revealed 18 sarcoidosis patients (4 of them born overseas) in the white population (3,500,000), and 30 cases in the African population (10,500,000)—a higher prevalence among whites than among Negroes, the opposite of the situation in the United States.]

*From Dr. Jacinto Convit, Caracas, Venezuela.*—The question raised by the authors of the article cited, concerning the incidence of sarcoidosis among the colored races of the tropics, is one that I believe is worthy of discussion in the JOURNAL. However, as far as Venezuela is concerned, the observations in the Division of Sanitary Dermatology (Leprosy), as well as in the Department of Dermatology of the Vargas Hospital, both of which are under my charge, are at variance with the conclusions arrived at by those authors.



The cases of sarcoidosis which have come to my notice in the two organizations mentioned have been very few. In fact, I recall having seen only two cases in the dermatology department of the Vargas Hospital, but I have been informed that in the Departments of Internal Medicine and of Tuberculosis the cases are a little more frequent. Even so, they must also be considered rare.

The two cases in the Department of Dermatology both had skin lesions. One of them, a mulatto, had plaques on the head, trunk and limbs, but not either visceral or bone lesions. The other, a mestizo about 12 years old, presented a generalized nodular eruption, and also lesions in the bones, glands and eyes. Both were diagnosed by biopsies and routine radiologic examinations. The cases seen in the other departments referred to did not present any skin lesions. In several of them the diagnosis was confirmed by lung biopsy.

None of the cases observed was in a pure Negro, but in mixtures of several races: white and Negro, white and Indian, and white, Indian and Negro.

[Purriel and Navarette said that no cases had been reported from Venezuela, and that they had not been able to learn of any on inquiry.]

*From Dr. A. M. Alonso, Rio de Janeiro, Brazil.*—Sarcoidosis is not frequent in Brazil, and every time a case of this kind is seen it constitutes a subject to be reported in medical meetings. Only about once in 5 years do I encounter a case.

Prof. H. Portugal has no more than 10 cases of sarcoidosis in his histopathologic collection of 7,000 dermatologic cases. Prof. R. Azulay has 2 cases in his private clinic, and 2 others in his service at the medical school (Faculdade Fluminense de Medicina). Prof. E. Rabello says that sarcoidosis of the lungs and lymph nodes is relatively more frequent than sarcoidosis of the skin.

I think it would be difficult to say if there are more cases in colored races here than in whites, for our sample is too small.

[Purriel and Navarette wrote of 18 cases published, and of 45 others which they had learned of on inquiry, saying nothing about race.]

*From Dr. Edgar B. Johnwick, Federal Leprosarium, Carville, La.*—Any patient with an established diagnosis of leprosy may be admitted to Carville, whether the disease is active or inactive. So we have admitted patients with inactive tuberculoid leprosy, frequently for corrective surgical procedures, followed by discharge after the patient had received maximum benefit from hospitalization.

Almost all of our cases have been thoroughly studied before the patient requested admission to Carville. Often we participate in the process by examining biopsy material submitted to us. Our pathologist, Dr. G. L. Fite, finds no particular difficulty in differentiating sar-

coidosis from leprosy, regardless of the presence or absence of bacilli in the specimen submitted.

Although most cases admitted to Carville have had the diagnosis established elsewhere, it is permissible to admit patients to this hospital for diagnostic studies if the referring physician wishes to have this done, but such study cases are relatively few in number. An occasional patient comes from almost any distance on his own volition and at his own expense, presenting himself with or without referral papers. Some of these people have totally unsubstantiated obsessions and fears that they may have leprosy. Most of them had nothing wrong with them except leprophobia; none had sarcoidosis.

As can be gathered, we have had almost no experience at Carville with sarcoidosis. In the past 5 or 6 years we have seen the condition 3 times: in an outpatient, not admitted; in a biopsy specimen sent in for consultation; and in a pleural, miliary lesion found at autopsy, not the cause of death. There are, of course, many patients here who have lesions that imitate sarcoidosis in superficial appearance.

[Dr. Johnwick, to be helpful, sent our inquiry to several colleagues, mostly dermatologists, closer in touch with sarcoidosis than he was. Replies were received from Drs. John M. Knox, of Baylor University School of Medicine, Houston, Texas; Arthur C. Curtis, of the University of Michigan Medical Center, Ann Arbor, Michigan; Edward P. Cawley, of the University of Virginia Hospital, Charlottesville, Virginia; Sidney Olansky, of Emory University Clinic, Atlanta, Georgia; V. J. Derbes, Tulane University School of Medicine, New Orleans, Louisiana; and David G. Smith, of the Duke University Medical Center, Durham, North Carolina.

[Most of the replies dealt at more or less length with the report of the Washington Conference, and with the markedly greater prevalence of sarcoidosis among Negroes in the United States than among whites.

[Dr. Knox remarked: I am not familiar with the literature of sarcoidosis in Africa, but I feel that the authors mentioned would need data to support their thesis.

[Dr. Curtis told of a visit to Brazil (condensed): When I was in Rio de Janeiro in 1956 I was told that sarcoidosis was a disease that they never see. It is my impression from what I learned that the tuberculoid type of leprosy is almost impossible to differentiate from sarcoidosis from a pathological point of view, and many of the cases that have sarcoidosis in Rio are actually confused with tuberculoid leprosy. I have never seen a study of any magnitude, done in areas where leprosy is common, to rule out the possibility that some of the lesions which may be called tuberculoid leprosy are perhaps sarcoid. I would add the suggestion that it might be of interest to subject sarcoidosis cases to testing with lepromin (the Mitsuda antigen) as well as with the Kveim antigen, to see if they show loss or reduction of

lepromin reactivity as they do with respect to tuberculin.]

*From Dr. K. Kitamura, Tokyo, Japan.*—Sarcoidosis is a systemic disease which, in Japan, has been a subject of research only in the recent years. For long years its skin manifestations were regarded as merely a form of skin tuberculosis, i.e., Boeck's sarcoid or lupoid, Besnier's lupus pernio, Brocq-Pautrier's angiolupoid, and Darier-Roussy's subcutaneous sarcoid, or as cheilitis granulomatosa.

The first two Japanese cases of sarcoidosis were reported in 1921. The data in Nobechi's report in the transactions of the conference you cited tells how our attention to sarcoidosis as a systemic disease has increased in these few years—1921-1945 (25 years), no cases; 1946-1955 (10 years), 14 cases; and the recent 5 years, 54 cases.

From many institutions throughout the country we have collected by means of questionnaires some 400 wholly probable cases. Subsequently, many more cases have been picked up under the criteria set up for sarcoidosis: bilateral hilar adenopathy, positive Kveim test, typical epithelioid cell granuloma, etc. I hope to be able to tell you in the near future more details of these confirmed cases.