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Item 5

MEDICAL PROBLEMS OF NEWLY-CONTACTED INDIAN GROUPS

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MEDICAL PROBLEMS OF NEWLY-CONTACTED INDIAN GROUPS

1. Before entering on the theme of this paper, we would like to present a few questions on the meaning of "newly-contacted indian groups".

a) To what period of time should this classification be objectively applied?

b) Would not a group classified as newly-contacted have had direct ou indirect contacts previously ignored?

c) How do we define a tribe that has had one and only one rapid contact, for example eighty years ago?

d) How would we classify groups of indians who, living in isolation in their own primitive environment, have had during the last sixty years rare and intermittent contacts registered in brief encounters?

2. Our aim in this paper is to mention facts and to report on our personal experience. We do not intend nor desire to interpret these facts and this experience.

3. On considering the deficiencies of such a study it is necessary to take into account the difficulties that prevail in this enormous and primitive region lacking in means of transportation and communication where a dispersed and almost extinct population still live as in the Stone Age.

4. According to various authors, the autochthonous population of Brazil was calculated in 1.500.000(20)inhabitants

at the time of the discovery. Nowadays this population, spread throughout the national territory is reduced to approximately 80.000 indians living in tribal conditions. Among the causes of the depopulation of the brazilian indians, infectious diseases - at times deliberately used as an instrument of extermination by the so-called civilized men - have perhaps been the most efficient (13). Many are the documented instances of extermination of the indigenous population through grippe, measles, smallpox, venereal diseases, malaria etc. (15)

5. In 1946, in a region that comprises the upper basin of the Xingu river, one of the largest tributaries to the Amazon river, the Brazilian Government created the "Parque Nacional do Xingú" (PNX) (Xingu National Park) with an area of 22.000km^2, between latitudes 9 and 12° South and longitudes 52 and 54° West, at an altitude of 820 feet. (See Chart in the Appendix). This area in the geographical heart of Brazil has been considered by specialists - zoologists, botanists, anthropologists etc. - to be representative of primeval Brazil from the point of view of flora, fauna and human conditions. The present population is approximately 1.000 indians distributed in the following tribes (see Table 1 in the Appendix): (5)

Kamayurá	Juruna
Kalapalo	Aupatse
Kuikuro	Nahukwá
Waurá	Matipuhy
Iawalapiti	Kajabi (since 1952)
Aweti	Suyá (since 1960
Trumai	Txukarramãi (since 1962)

Txikão (since sept. 1967)

The table* only includes the indians that we have examined)

*All tables and photographs are included in the Appendix.

6. These fifteen tribes are autonomous. Some groups now dispersed are to be found among these tribes. There are others in the same conditions that have not been contacted yet and that live in or around the PNX.

7. These tribes fall mainly within four linguistic groups: Tupy, Karibe, Aruak and Gê. There is also an isolated linguistic group: the Trumai.

8. Access to the PNX is almost exclusively by air, as there are no roads and fluvial navigation is poor. Permission to land on the airstrips existing in the PNX is given only to military and other government aircrafts, and special permission is needed by all strangers wishing to enter the PNX.

9. Communications within the PNX are precarious since the Park has only one airplane, a few canoes and one radio station.

10. Since its inception the PNX administration has been directed by the sertanista Orlando Villas Bôas-well known for his practical knowledge of the brasilian backlands. Orlando Villas Bôas, assisted by his brother Claudio Villas Bôas, also a reputed sertanista, exerts a very close watch on the relations between the indians of the area and visitors, mainly anthropologists, ethnologists, psychologists, physicians, dentists, nurses etc., that do research in the PNX or give indians assistance in various ways.

11. The first contact we know to have occurred between this area and the so-called western civilization was in

1884 by the first Karl von den Steinen Expedition(18). From then on other expeditions have passed through the region. Those listed below certainly represent a number well above the possible omissions (1).

1884 - First Expedition of Karl von den Steinen
1897 - Second Expedition of Karl von den Steinen
1896 - H. Meyer
1900 - Max Schmidt
1920 - Rondon Commission, directed by Lieutenant Ramiro Noronha
1920 - Percy Fawcett
1924 - Heinrich Hintermann
1924 - Rondon Commission, directed by Captain Vicente Vasconcelos.
1925 - Percy Fawcett (second expedition, during which he disappeared)
1928 - G.M. Doyott
1931 - Vicent M. Petrullo
1940 - National Service for the Protection of Indians.

12. In the H. Meyer Expedition in 1896, Karl E. Ranke (12) a german doctor and demologist, participated and reported on the diseases which he observed. The terms he used are relevant and we feel it is worth quoting them in full:

"The diseases observed in 10 indian villages among approximately 800 to 1000 indians are the following: many healed fractures and one old haunch luxation but, according to the anamnesis, not congenital; one case of clubfoot, congenital; a very frequent skin disease, described as "Tinea imbricata" from the Malayan Archipelago and the Southern sea; numerous furuncles,

most of them in the gluteal region; two cases of idiocy; one case of apparently parasitical tumor in the liver, which had as a consequence an ascites not very developed; a kind of rheumatic disease of the joints; numerous cases of malaria and malarial "cachexia" in children under 10 years old and a not very strong enteritis among new born infants. The occurrence of leucomas and staphylomas was extremely frequent in the Xingu - area. Among the Bakairi from Kulisehu, none had been spared .

With the help of a Bakairi from Paranatinga, the famous Antonio, who up to now has accompanied all expeditions to the Xingu-area, I learned the history of their existence. Once, after the second expedition to the Xingu-area, the Bakairi from Kulisehu went to Paranatinga and form there proceeded to Rosario. They were welcomed and although they had no knowledge of the brazilian language, they were immediately baptized and after a few days' stay they went back carrying a heavy load of gifts.

One of the tribesmen acquired an ophtalmic blennorrhagia, in Rosario which after his return to the Bakairi-village on the Kulisehu spread to a terrible epidemic. All the inhabitants were affected, some died, others lived out of the disease having lost an eye, or having some leucomas. The numerous conjunctivitis which I myself saw, were all of a benign nature, so I think that the Gonococcus has vanished from the Xingu-area. It seems rather peculiar that I did not find any sign of it, not even congenital, and that it had not spread throughout the indians, nor affected their sexual organs.

Lepmosy, syphilis and tuberculosis are totally inexistent in the Xingu-area. The inexistence of tuberculosis is of greater significance, as wherever indians come in direct

contact with white men, a terrible devastation results.

It may also be that measles, scarlet fever and smallpox are likewise unknown in the Xingu-area, although we are not so sure about their non-existance at the time of our visit, as we are in the case of the previously mentioned diseases. Only in the case of smallpox can we assure its non-existance, due to the fact that we found no one displaying small-pox-scars".

13. In 1946 the white man took firm hold of the region, though not in large numbers. Before entering the area that later became the PNX all of them went through a medical examination. Between 1947 and 1950, the author, in his capacity as a doctor in the Roncador-Xingu Expedition, had every person entering the region keep a sort of moral and sanitary quarantine. Thus we were able to prevent venereal diseases and to protect the indian women from the so-called civilized men who would have competed with the autochthonus males.

14. At the time of their first contact with the Roncador-Xingu Expedition of 1946, an outbreak of grippe killed around 25 Kalapalo indians. (5) Another outbreak was registered in 1950 in the same tribe as well as in the Kamayurá tribe, killing 12 persons this time.

15. In June 1954 there was an epidemic of measles (7) in the upper Xingu. Neither from the recollections of the elders nor from the traditions of all the tribes were we able to gather information as to this. Every indian who had been in contact with the Roncador-Xingu Expedition at that time, had been hit by that outbreak. Of the 654 patients, 114 died (7). Among those who received medical care, the lethality rate was

9,6%; among those to whom it was impossible to give medical care in time, the lethality rate attained 26,8%.

16. These were the two epidemic outbreaks that occurred in the upper Xingu since the first systematic contacts of the population of that region with the Roncador-Xingu Expedition.

17. The diseases listed below were observed by us and other doctors who have been in the area. It is a simple list on which we will make no comments:

- Tinea imbricata
- gastroenteritis
- a purulent lung abscess of unknown etiology
- furunculosis
- child umbilical hernia
- arthritis deformans
- helminthiasis
- pemphigus foliaceus
- piedra
- Blastomycosis cheloidiana (Paracoccidioides Loboi) (3)
- warts
- polymorphous acne
- pediculosis
- Ptiariasis alba
- gravidic striation
- Pulex penetrans
- conjunctivitis

- pigmentary and cellular nevi (6)
- leucoma
- pinguecula
- pterygium
- pupillary seclusion
- melanic pigmentation of the conjunctiva
- chalazion
- cataract
- ocular hypotension
- talipes
- malarial hematological disturbances (17)
- deformation of the auricular pinna due to a sports fight named Huca-Huca
- atrophy of the lower limbs due to ritual custom: prolonged constriction of the lower legs during infancy
- scapulo-humeral luxation
- tegumentary leishmaniosis (4)
- reversible paralysis of the infeior limbs due to ritual ingestion of mucunã (Dolichos pruriens and/or Dolichos urens)
- toxoplasmosis (recently discovered) (2)
- filaríasis (2)
- various arborviri, recently discovered (2)

18. As we believe that the purpose of our participation in this meeting is to tell about our personal experience in dealing with groups of recently contacted indians, I shall dwell on tuberculosis which is the main field of my observations. Since 1952, at first with X-ray and sometimes with old tuberculin (von Pirquet modified: cutipuncture)

and, since 1960, with purified tuberculin (PPD-Rt 23-1 UT), I have raised the problem of tuberculosis not only in the area of the PNX but also in other indian villages, both to those contacted long ago and to those who have just been contacted. (Table 2).

19. In 1952, coming from the Teles Pires river, in the valley of the Tapajós river, there came to the PNX the Kajabi indians and with them the Blastomycosis cheloidiana (Jorge Lôbo's disease) (3). This group had already been in contact with white men in the area from where they were coming.

20. In 1960 the Villas Boas brothers established contact with the Suyá tribe. This small group of approximately 80 indians had had only a three-day contact with the first Karl von den Steinen Expedition in 1884. This contact was marked by encounters. At that time the group in question numbered 150 indians according to an estimate by von den Steinen. No other encounter was registered, not even by Karl von den Steinen himself in his second Expedition in 1887 (19). The presence of the Suyá group in the upper Paranajuba river was known because of their periodical incursions and attacks on other tribes for which the Suyá were so feared. A few days after contact had been established with the Villas Boas brothers, we were able to include part of that tribe - 42 persons - in our tuberculin survey (PPD-Rt 23-1 UT). Though we did not at that time have at our disposal a large quantity of suitable equipment and though we did not have much experience on the use of PPD, we found eight positive reactions among this population, one weak and seven strong ones, making up an infection rate of 19%. On that occasion we applied the

PPD test - also for the first time - to the other tribes of the upper Xingu, finding a infection rate of 3,2% among the Kajabi, and 5,3% among the Meinako. The Kajabi had had, as we have said, contact with civilized men before settling in the PNX. On the other hand the Meinako reactors had stayed in the city of São Paulo for a few months (8). The other tribes were found to be non-allergic. Subsequent research with X-rays revealed thepresence of cases of lung shadows among the Suyá and in 1967, for the first time, we were able to obtain from them a positive sputum by BK. In spite of all the natural difficulties, we were able to take a culture of bacilli in a Sula solution to the Central Laboratory of Tuberculosis in the State of Guanabara, where they are being studied by Professor Milton Fontes Magarão and his staff. (Tables 3, 4 and 5)

21. In 1965, 180 indians, fleeing the pressure of the so-called "pioneer fronts" (in this case a group of garimpeiros, prospectors of precious stones and metal), sought refuge in the PNX. These indians, the Txukarramãi tribe of the Kayapó group (Gê), settled in a place named Pororí, on the left bank of the Xingu river. This particular tribe had been observed by us in 1962, revealing a low rate of tuberculin infection. (Table 6).

22. In 1966, when the Txukarramãi had already settled in the PNX, we classified 158 of them in our thoraco-tuberculin file and examined their sputa. (Table 7) (10).

23. Three persons revealed presence of BK in their sputa. Moreover, we discovered three other strongly positive cases presenting radiologic forms of the type that

do not usually reveal BK in direct sputum analysis, such as, for example, two ganglionary forms. All of them underwent treatment with INH, PAS and SM (Table 8) (10).

24. In 1967 there came to the knowledge of the administrators of the PNX the fact that a group of comple - tely isolated indians - the Txikão - were being pressed by another "pioneer front", also a group of prospectors of gold and diamonds. These indians used to live on the banks of the Jatobá river, a sub-tributary to the Xingu river. The few contacts that they are known to have had consisted of attacks against other tribes living in the PNX, from whom they attemp ted to take women and utensils. In order to prevent indiscri- minate and undisciplined contact with members of our civili- zation, the administrators of the PNX were able to resettle the whole tribe of 54 indians within the boundaries of the Park. We were then able to apply the tuberculin test to the- se newcomers at the moment of their arrival, with negative results.

25. In 1967 we repeatd the research among the Txukarramãi and verified, this time, the absence of bacilli in the direct sputum analysis, as well as radiological regres sion of lung shades, in spite of an increase in the general rate of infection. This result was perhaps due to better equipment and technique employed in the test, (Table 9).

26. We were surprised at the clinico-radiological as well as at the epidemiological aspect of tuberculosis in populations so primitive as the Suyá and Txukarramãi. One would expect, once the disease was verified among them, the

occurrence of an epidemic that would have presented different forms such as the so-called infant-form in adults, acute and miliary forms, of rapid evolution, similar to the forms found among the Senegalese soldiers taken to France during the First World War (16). Dramatic epidemic as the one above are often described in medical literature in primitive peoples. Nevertheless, we were able to verify that among the Suyá and Txukarramãi the forms were the same as those that often occur among civilized white people, who, thanks to their natural and acquired resistance have means to thwart the evolution of the disease. The X-rays that we present here do not, in our view, leave any doubt that tuberculosis among the above mentioned indians, in its clinical, radiological and even in its epidemiological aspects, can be equated with that of peoples with a long experience with BK.

27. Had these tribes at one time undergone the so-called epidemic period of tuberculosis as other peoples have ? It is not easy to answer this question, Is it pos - sible that the BK responsible for the disease among them is less virulent than the BK responsible for the disease among whites ? This hypothesis may be answered by the result of Professor Magarão's research mentioned above.

28. In any case, we believe that the PNX is an adequate environment for the development of planned and controlled scientific research on the behaviour of primitive populations vis-à-vis tuberculosis and other infectious or non-infectious diseases introduced by the white invader.

29. It is useful to present a table on the rate

of infection of tuberculosis among the Terena (11), Kayua and Kadiweu indians living in the south of the State of Mato Grosso, that have been in close contact with the white civilization for at least one hundred years (Table 11) (9).

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SCHEMATIC CHART

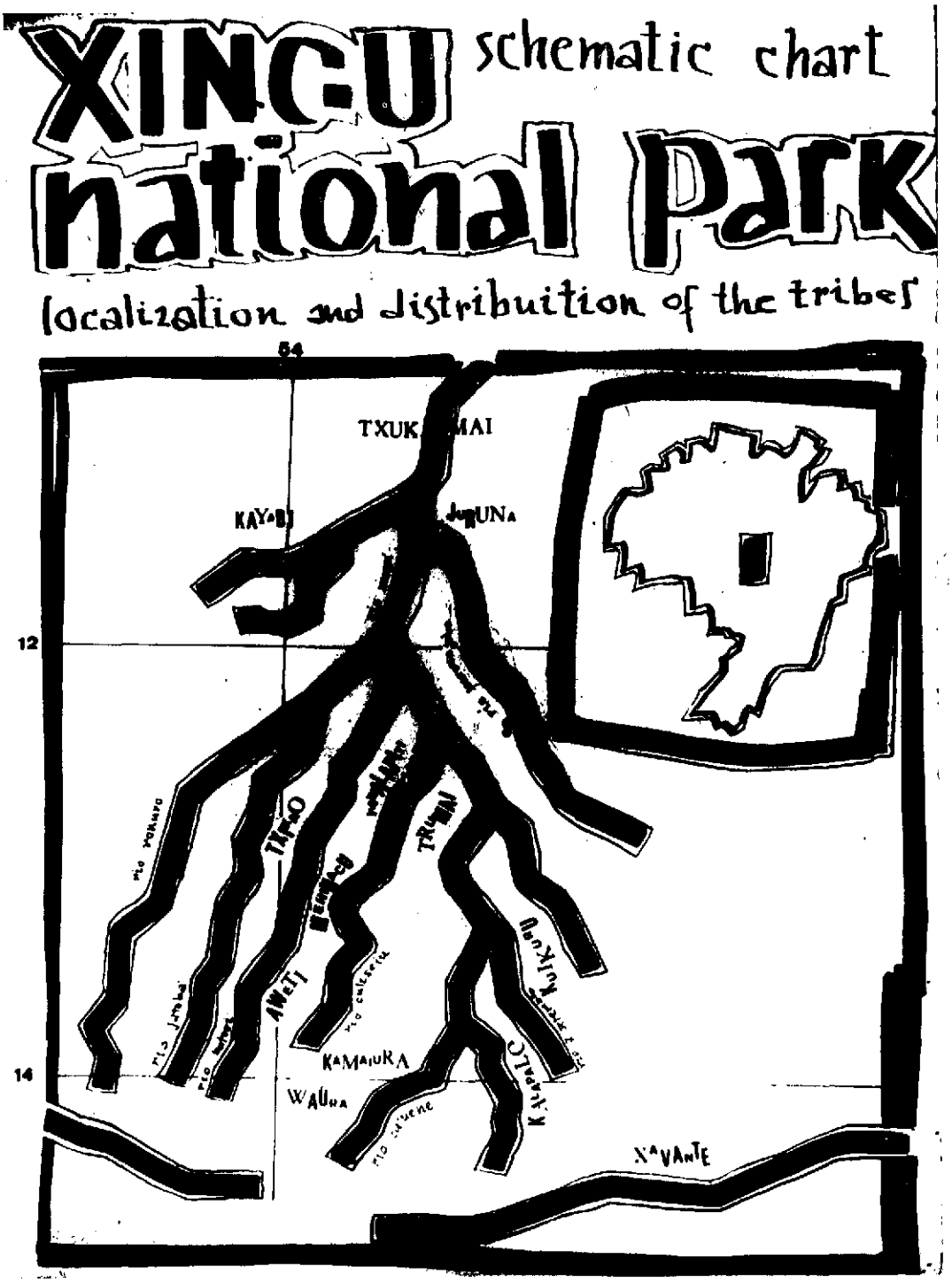


TABLE 1

NATIONAL SERVICE OF TUBERCULOSIS - S.U.S.A.

POPULATION OF THE XINGU NATIONAL PARK BY AGE GROUPS

BRAZIL - JULY OF 1967

TRIBES	TOTAL	AGE GROUPS					
		0-4	5-9	10-14	15-19	20-29	30 +
KAMAIURÁ	89	16	11	11	9	18	24
KAJABÍ	152	32	21	15	13	35	36
KALAPALO	68	14	14	5	11	13	11
JURUNA	49	10	8	4	6	11	10
MEINACO	35	5	6	2	8	5	9
SUIÁ	67	11	7	11	6	18	14
IAWALAPITI	34	2	8	3	3	6	12
TRUMAI	22	5	3	2	3	4	5
AUETI	40	9	8	6	-	3	14
KUIKURO	118	20	19	10	8	38	23
WAURÁ	62	17	14	1	7	15	8
TXUKARRAMÃI	170	36	21	19	16	33	45
TCHICÃO	53	9	4	5	9	22	4
TOTAL	959	186	144	94	99	221	215

TABLE 2

NATIONAL SERVICE OF TUBERCULOSIS S. U. S. A.

FREQUENCY DISTRIBUTION ACCORDING THE SIZE OF REACTIONS TO TUBERCULIN TESTS (PPD-R123-I UT) IN INDIAN TRIBES OF XINGU NATIONAL PARK

BRAZIL-JULY OF 1960

GROUPS OF NATIVES	TESTED INDIANS	READ TESTS							
		TOTAL	0-4 mm		5-9 mm		10 mm +	
			Nº	%	Nº	%	Nº	%
KAMAIURÁ	76	76	74	97,4	2	2,6	-	-
KAJABI	63	63	60	95,2	1	1,6	2	3,2
KALAPALO	51	51	51	100,0	-	-	-	-
JURUNA	45	45	45	100,0	-	-	-	-
MEINACO	38	38	36	94,7	-	-	2	5,3
SUIÁ	42	42	34	81,0	1	2,4	7	16,6
IAWALAPITI	37	37	37	100,0	-	-	-	-
TRUMAI	17	17	17	100,0	-	-	-	-
AUETI	15	15	15	100,0	-	-	-	-
KUIKURO	3	3	3	100,0	-	-	-	-
WAURÁ	2	2	1	50,0	1	50,0	-	-
TOTAL	389	389	373	95,9	5	1,3	11	2,8

TABLE 3

NATIONAL SERVICE OF TUBERCULOSIS S.U.S.A.

FREQUENCY DISTRIBUTION ACCORDING TO THE SIZE OF REACTIONS TO TUBERCULIN TESTS (PPD-Rt-23-I UT) IN SUIÁ TRIBE OF XINGU NATIONAL PARK

BRAZIL - JUNE OF 1960

GROUPS	NUMBER OF TESTS	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
ADULT	21	17	80,9	-	-	4	19,1
CHILD	21	17	80,9	1	4,8	3	14,3
TOTAL	42	34	80,9	1	2,4	7	16,7

TABLE 4

NATIONAL SERVICE OF TUBERCULOSIS S.U.S.A.

FREQUENCY DISTRIBUTION OF TUBERCULIN TESTS (PPD-Rt-23-I UT) BY AGE GROUP IN THE "SUIÁ" TRIBE OF XINGU NATIONAL PARK

BRAZIL - AUGUST OF 1966

AGE	TOTAL OF TESTS	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
0-4	8	8	100,0	-	-	-	-
5-9	10	9	90,0	-	-	1	10,0
10-14	13	11	84,6	-	-	2	15,4
15-19	5	4	80,0	-	-	1	20,0
20-29	22	17	77,3	1	4,5	4	18,2
30 +	13	7	53,8	-	-	6	46,2
TOTAL	71	56	78,9	1	1,4	14	19,7

TABLE 5

NATIONAL SERVICE OF TUBERCULOSIS S.U.S.A.

FREQUENCY DISTRIBUTION OF TUBERCULIN TESTS (PPD-Rt23-I UT) BY AGE GROUP IN THE "SUIÁ" TRIBE OF XINGU NATIONAL PARK

BRAZIL - JULY OF 1967

AGE	TOTAL OF TESTS	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
0 - 4	11	11	100,0	-	-	-	-
5 - 9	7	4	57,1	-	-	3	42,9
10 - 14	11	8	72,7	-	-	3	27,3
15 - 19	6	4	66,7	-	-	2	33,3
20 - 29	18	14	77,8	-	-	4	22,2
30 +	14	6	42,9	-	-	8	57,1
TOTAL	67	47	70,1	-	-	20	29,9

TABLE 6

NATIONAL SERVICE OF TUBERCULOSIS - S.U.S.A.

FREQUENCY DISTRIBUTION ACCORDING THE SIZE OF REACTIONS TO TUBERCULIN TESTS (PPD Rt 23-I UT) IN TXUKARRAMÃI TRIBE OF XINGU NATIONAL PARK

BRAZIL – 1962

GROUPS	NUMBER OF TESTS	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
ADULT	19	17	89.4	1	5.3	1	5.3
CHILD	20	20	100.0	-	-	-	-
TOTAL	39	37	94.8	1	2.6	1	2.6

TABLE 7

NATIONAL SERVICE OF TUBERCULOSIS - S.U.S.A.

FREQUENCY DISTRIBUTION OF TUBERCULIN TESTS (PPD RT 23-1 UT) BY AGE GROUP IN THE TXUKARRAMÃI TRIBE OF XINGU NATIONAL PARK

BRAZIL - AUGUST OF 1966

AGE	TOTAL OF TESTS	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
0-4	36	31	86.1	1	2.8	4	11.1
5-9	25	19	76.0	2	8.0	4	16.0
10-14	15	10	66.7	2	13.3	3	20.0
15-19	16	14	87.5	-	-	2	12.5
20-29	28	18	64.3	1	3.6	9	32.1
30 - +	38	23	60.5	5	13.2	10	26.3
TOTAL	158	115	72.8	11	7.0	32	20.2

TABLE 8

NATIONAL SERVICE OF TUBERCULOSIS - S. U. S. A.

FINDING OF TUBERCULIN TESTS X RAYS AND BACILLOSCOPY IN TXUKARRAMAI TRIBE OF XINGU NATIONAL PARK

BRAZIL - AUGUST OF 1966

PULMONARY SHADOWS	TUBERCULIN TESTS			TOTAL
	0 - 4 mm	5 - 9 mm	10 mm +	
MINIMUM	-	-	1	1
MODERATE	-	-	2(1*)	2
ADVANCED	1*	1	1*	3
PULMONARY GANGLION	1	1	2	4
PLEURAL	-	-	-	-
TOTAL	2	2	6	10
NUMBER OF ABREUGRAPHY	105	11	32	148
PERCENTILE OF PULMONARY SHADOWS	1,9%	18.2%	18.7%	6.7%

* POSITIVE SPUTUM

TABLE 9

NATIONAL SERVICE OF TUBERCULOSIS - S.U.S.A.

FREQUENCY DISTRIBUTION OF TUBERCULIN TESTS (PPD Rt 23-1 UT) BY AGE GROUP IN THE TXUKARRAMÃI TRIBE OF XINGU NATIONAL PARK

AGE	TOTAL OF TESTS	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
0-4	34	32	94,0	1	3,0	1	3,0
5-9	20	13	65,0	1	5,0	6	30,0
10-14	19	13	68,4	1	5,3	5	26,3
15-19	16	12	75,0	-	-	4	25,0
20-29	33	16	48,5	1	3,0	16	48,5
30 +	44	26	59,1	2	4,5	16	36,4
TOTAL	166	112	67,5	6	3,6	48	28,9

TABLE 10

NATIONAL SERVICE OF TUBERCULOSIS S.U.S.A.

FREQUENCY DISTRIBUTION ACCORDING THE SIZE OF REACTIONS TO TUBERCULIN TESTS (PPD - Rt. 23 - 1 U.T.) AMONG ALL TRIBES OF XINGU NATIONAL PARK

BRAZIL - JULY OF 1967

GROUPS OF NATIVES	TESTED INDIANS	READ TESTS							
		TOTAL	0 - 4 mm		5 - 9 mm		10 mm +		
			Nº	%	Nº	%	Nº	%	
KAMAIURA	89	89	85	95,5	3	3,4	1	1,1	
KAJABI	152	149	139	93,3	4	2,7	6	4,0	
KALAPALO	68	59	58	98,3	1	1,7	-	-	
JURUNA	49	49	48	98,0	-	-	1	2,0	
MEINACO	35	33	29	87,9	1	3,0	3	9,1	
SUIÁ	67	67	47	70,1	-	-	20 *	29,9	
IAWALAPITI	34	27	24	88,9	-	-	3	11,1	
TRUMAI	22	21	20	95,2	1	4,8	-	-	
AUETI	40	37	37	100,0	-	-	-	-	
KUIKURO	118	112	111	99,1	-	-	1	0,9	
WAURÁ	62	61	59	96,7	2	3,3	-	-	
TXUKARRAMÃI	170	166	112	67,5	6	3,6	48	28,9	
TXICÃO	53	53	53	100,0	-	-	-	-	
TOTAL	959	923	822	89,1	18	1,9	83	9,0	

* AMONG THE STRONG REACTORS OF "SUIÁ" THERE WAS ONE CASE WITH DIRECT AND POSITIVE BACILLOSCOPY

TABLE 11

NATIONAL SERVICE OF TUBERCULOSIS S.U.S.A.

FREQUENCY DISTRIBUTION OF TUBERCULIN TESTS (PPD-Rt 23-1 UT) BY AGE GROUP

NATIVE AREA OF IR/5 OF S. P. I.

BRAZIL-SEPTEMBER-OCTOBER OF 1965

AGE	TOTAL	READ TESTS					
		0-4 mm		5-9 mm		10 mm +	
		Nº	%	Nº	%	Nº	%
0-7	584	559	95,7	4	0,7	21	3,6
8-14	634	537	84,7	37	5,8	60	9,5
15-49	746	525	70,4	71	9,5	150	20,1
50- +	145	98	67,6	19	13,1	28	19,3
TOTAL	2109	1719	81,5	131	6,2	259	12,3

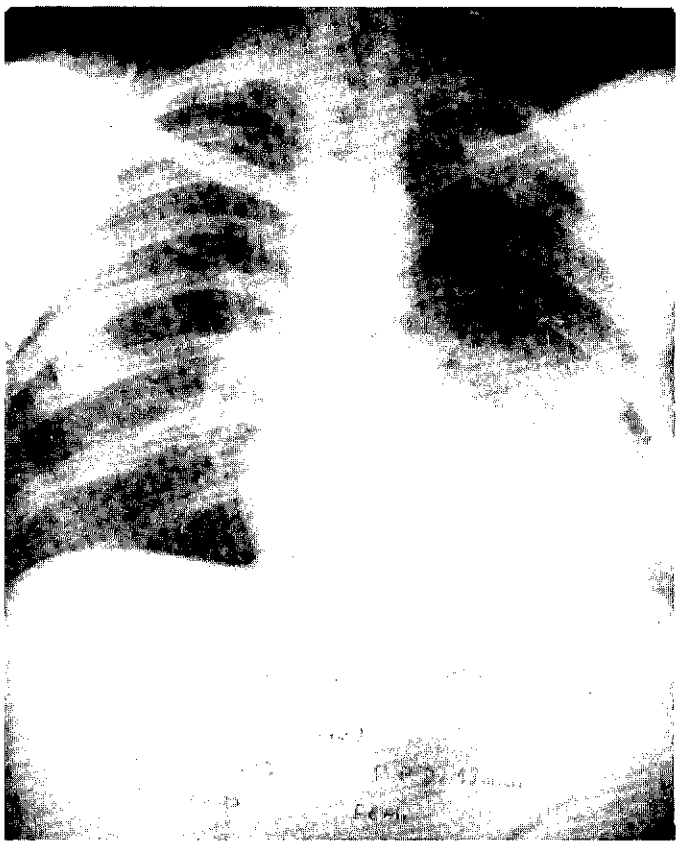
Tinea Imbricata

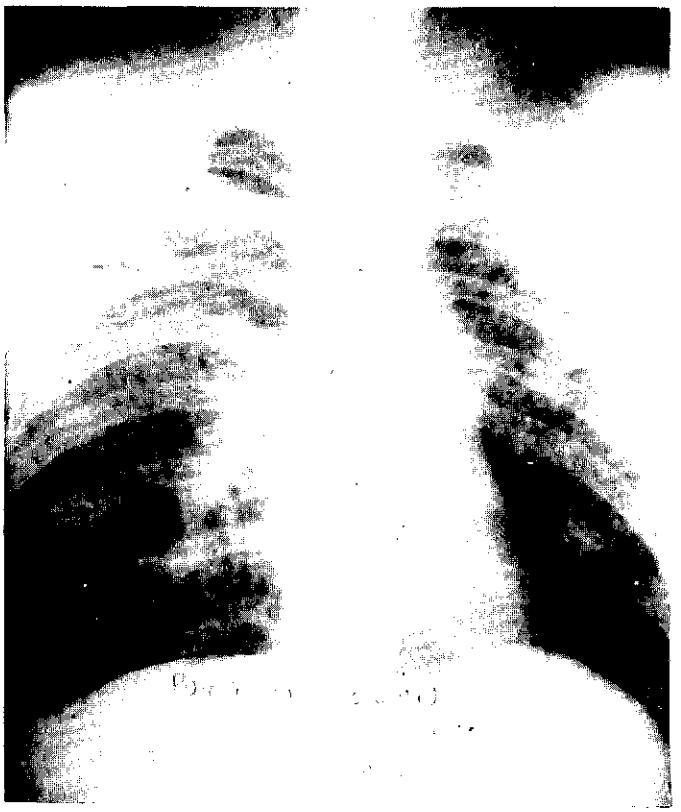
Reading a Tuberculin reaction on a Txukarramãe child (his tribes presents 28.9% of PPD reactors)

"Javari" feast in a Kuikuro Village. (0.9% of PPD reactor).

A Txukarramãe family.

Female of Txikão Tribe
(Totally analergic to PPD test).





Radiological aspects of the 4 (four) BK positive cases known in the Xingu area.