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THE PRESENT SITUATION OF ENDEMIC TREPONEMATOSES (YAWS AND PINTA)
IN THE REGION OF THE AMERICAS

July-August 1988

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Introduction

Until the first half of this century, yaws and pinta represented an important public health problem in several countries in Latin America and the Caribbean (e.g. Haiti, Jamaica, Mexico, Colombia, Suriname, etc.)

With the advent of penicillin therapy it was possible to eliminate or eradicate pinta and yaws in most of the endemic areas through mass campaigns coordinated by WHO/PAHO during the 1950's and 1960's.

Unfortunately, pockets of the two endemic treponematoses still exist in some countries, namely in rural areas.

In order to assess the present situation of yaws and pinta, visits of one week duration were planned to Suriname, Guyana, Venezuela, Colombia, Panama, Mexico (State of Michoacan and Oaxaca*, and Brazil (Belém - State of Pará). Because of logistical problems and recent reports of yaws in rural areas of Haiti, Haiti was visited instead of Colombia.

Main Objective

The main objective of these exploratory visits was to assess the situation of the endemic treponematoses through epidemiological analysis (number of patients according to sex, age, geographical origin, estimates of seroprevalence and trends) and a description of national control programs.

Activities

During the months of July and August 1988 the following activities were undertaken in the countries visited:

- Review of available statistical data in all countries.
- Discussions with health personnel responsible for the dermatology clinics or general practitioners at health centers.

It was not possible to visit the remote areas in which cases are now occurring, because sufficient time was not allotted for the trips.

Recommendations (See also specific country reports)

Suriname

This year, a "Bush Negro" patient from the interior of Suriname was diagnosed with clinical recent yaws in Paramaribo. Because of guerrilla warfare activity in this area no survey could be done, but this should be attempted in the areas in which the "Bush Negros" live, once travel to the interior is safe.

* The initial plan was to visit Guerrero and Chiapas and the changes were made by the Ministry of Health in Mexico.

Guyana

The 36 cases of yaws diagnosed at the leprosy clinic in Georgetown in the period from 1979 to 1984 indicate that a survey should be planned for Guyana. It is also necessary to investigate pinta among Indians living on the border with Venezuela.

Venezuela

According to all the information obtained, yaws has been eradicated from Venezuela.

There is a great possibility of endemic pockets of pinta persisting among Indians tribes living in the Territory of Amazon and in the South of the state of Bolívar.

Because of the difficulties in reaching these areas, experienced field health personnel responsible for malaria and leprosy control should be involved in the planning and implementation of activities for the eradication of pinta.

Panama

According to all the information obtained, yaws has been eradicated and pinta was never confirmed in Panama.

In spite of this, yaws should be investigated in rural populations living on the border with Colombia.

Haiti

There is no information available to analyze the present situation of yaws and even the small foci of pinta, but according to a short-term consultant epidemiologist in Haiti, active cases of yaws are still occurring in rural areas of the South.

A yaws survey of the district of Jeremie should be a top priority.

Mexico

In spite of the well organized campaigns, cases of active pinta are still being reported in one of the states visited - Oaxaca.

Active case finding seems to be necessary in at least 3 or 4 of the previous endemic states in order to eradicate the disease.

Yaws has never been diagnosed in Mexico.

In general, if additional financial support could be obtained, longer well planned missions (2-3 weeks each) should be carried out initially in Guyana, Haiti, Suriname, and Colombia, to conduct clinical and laboratory evaluations (including serological surveys) in populations living in suspected endemic areas. Health authorities should be made aware of the need to train and use health personnel working in remote areas in other health programs (e.g. malaria, leprosy, leishmaniasis) to detect cases of pinta and yaws in the remaining countries where these endemic treponematoses are still suspected to occur. Mass treatment of cases and contacts with penicillin as required, should then be carried out to eradicate yaws and pinta from the Americas.

Suriname

Period of visit: 12-14 July, 1988.

Activities:

- 12 July The first day we were able to visit the Department of Dermatology and the Pan American Health Organization Representation.
- 13 July In the morning, we were able to discuss matters relating to the main skin diseases that are seen in the clinic, particularly relating to yaws and pinta patients. In the afternoon, along with Dr. S. Sadal (Chief of the Department of Dermatology) we were able to visit a health center in Groningen, 60 Kms. from Paramaribo. Here we were able to interview selected health center personnel, and the Director.
- 14 July We visited the Department of Dermatology of the School of Medicine and discussed the most prevalent skin diseases in the country. We also visited the Medical Mission, which does public health services primarily among Amerindians and Bush negroes (persons of African ancestry who are descendants from escaped slaves who inhabited the interior of the Eastern coastal regions of South America).
- 15 July Departure to Georgetown, Guyana

General information about yaws and pinta in Suriname.

As is well known, yaws was a highly endemic treponematoses in Suriname in the past. After the penicillin campaign and repeated mass surveys, very few patients have been recorded. According to information obtained from Dr. Sadal (Annex 1) positive serology ranged from 1.33% in the Nickerie District to 41.12% in the Malobi District. In the period covering 1976 to 1980, a total of 6,507 school children were examined, and serologically tested (VDRL and TPHA) in some cases). Of these 667 (10.2% were VDRL positive and 40 of these patients had titers of up to 1/16.

In most of these VDRL positive school children there were no clinical signs of yaws.

According to the dermatologists from Paramaribo interviewed (from the Ministry of Health and the School of Medicine), very few patients with clinical yaws have been seen in the past 8 years. This year a case of clinical lesions of early yaws was found in a Bush negro.

It is important to note that the Surinamese dermatologists know yaws, can recognize the disease and are concerned about it.

The dermatologists working for the Ministry of Health goes to the interior of the country on a regular basis for Leprosy control and simultaneously takes care of the other skin diseases.

Examinations of Amerindians and Bush negroes by general practitioners working for the Catholic Missions were conducted until recent years. Of 3,381 blood samples collected from patients examined, 579 (17%) were VDRL positive.

Health service infrastructure has deteriorated in the past two years due to the war situation, primarily in the areas of Bush negroes. Health care services have also been very irregular during this period. Local health personnel are concerned that yaws could again become a problem if the situation continues.

Conclusions

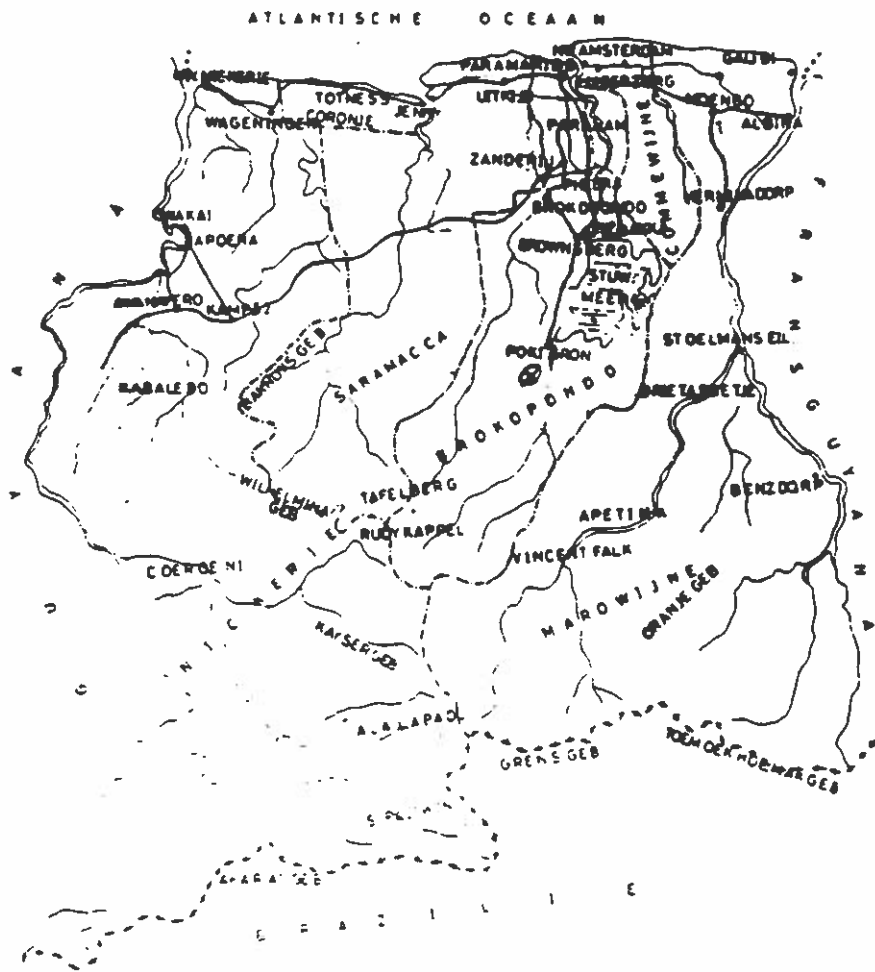
1. According to the information obtained, a high incidence of low titer positive serology in some districts could be explained by the existence of latent cases of yaws, or residual serology after penicillin treatment.
2. There is no information on venereal syphilis in the interior, even though it is high in urban areas, particularly in Paramaribo.
3. Very few cases of clinical yaws have been seen in the past eight years.
4. No endemic area of pinta is known in the country.
5. Due to the war situation it was impossible to visit areas of Amerindians and Bush negroes.

Recommendations

1. An exhaustive clinical examination of the Bush negro population should be undertaken after the war.
2. There should be a clinical examination of Amerindians living in remote areas.

KAART VAN SURINAME

ANNEX I



Guyana Period of visit: 15-21 July, 1988.

Activities:

- 15 July Visit to the PAHO Representation.
- 19 July We visited the Chief Medical Officer at the Ministry of Health.
- 20 July Interview with Dr. Ruth B. Huntley, Chief of Leprosy Control Program and Responsible for Leishmaniases.
- 21 July Visit to Dr. Lopez, a Cuban dermatologist working for the Ministry of Health since October 1987. He is the only dermatologist working in the country.

Interview with Dr. K. Carter, responsible for the Malaria Control Program.

Visit to Paika, a health center about 30 Kms. from Georgetown.

General information about yaws and pinta

Yaws

With the exception of 36 cases of yaws diagnosed in the leprosy clinic by Dr. R.B. Huntley and Dr. Patricia Rose, during the period from 1979 to 1984, there was no more information about the situation of yaws in the country. Also, I could not find any published paper and history about yaws campaigns.

The previously mentioned 36 cases of yaws were confirmed through clinical aspects and VDRL, according to the information provided by Dr. Huntley. All these cases were diagnosed in the area of Georgetown and Parika. Most of the patients were children and two were adults; the VDRL varied from 1/4 to 1/256 and in 28 patients the VDRL was over 1/6 and it was negative in three patients (Annex 1).

Conclusions

1. There is very little information about the situation of yaws in the country.
2. There is no information about pinta.

Recommendation

1. A yaws survey should be planned for Guyana.

Observation

There was no opportunity to visit areas in the interior due to lack of transportation.

1 of 2

"SPIROCHAETAL YAWS" (P.H.C.)

Georgetown - Guyana
1979 - 1984

No.	NAME	AGE	SEX	RACE	YEAR	VDRL
1	DR	12	M	I	(12/10/79) (23/11/79)	--
2	FM	15	M	I	(13/07/79) (23/11/79)	--
3	ES	41	F	I	(16/01/80) (06/02/80)	1:64
4	BS	12	M	I	(11/01/80) (08/07/80)	1:128
5	SG	14	M	A	(11/02/80) (08/07/80)	1:4
6	EG	12	F	A	(11/02/80) (08/07/80)	1:16
7	MB	5	F	A	(25/02/80) (08/07/80)	1:128
8	YM	7	F	I	(18/03/80) (08/07/80)	1:128
9	SC	9	M	I	(18/01/80) (08/07/80)	1:32 1:4
10	DL	35	M	I	(03/11/80) (24/11/80)	1:128
11	SD	8	F	I	(09/01/81) (20/01/81)	1:4
12	LF	12	M	M	(13/02/81) (18/02/81)	1:64
13	LP	10	M	I	(13/05/81) (20/05/81)	1:128
14	YA	4	M	I	(28/05/81) (03/06/81)	1:32
15	SC	4	M	A	(11/08/81) (21/08/81)	1:128
16	KC	6	F	I	(14/07/81) (21/08/81)	1:64
17	TS	3	M	I	(11/08/81) (31/08/81)	1:128
18	SK	10	M	A	(11/08/81) (31/08/81)	1:64
19	SC	7	M	M	(08/09/81) (16/10/81)	1:32
20	DC	6	M	M	(08/09/81) (16/10/81)	1:32

cont...
 "Spirochaetal Yaws"

2 of 2

No.	NAME	AGE	SEX	RACE	YEAR	VDRL
21	LS	14	M	I	(10/11/81) (03/12/81)	1:128
22	JD	8	F	A	(10/11/81) (03/12/81)	1:16
23	CC	13	F	M	(12/02/82) (19/02/82)	1:8
24	CS	14	F	I	(18/03/82) (19/03/82)	1:64
25	KN	12	F	A	(13/04/82) (12/05/82)	No Reay.
26	SH	8	F	I	(11/05/82) (28/05/82)	1:32
27	LK	4	M	M	(10/08/82) (15/09/82)	1:64
28	AR	15	F	A	(10/08/82) (15/09/82)	1:32
29	MT	14	F	A	(10/08/82) (15/09/82)	Neg.
30	TL	8	M	A	(06/08/82) (16/02/83)	1:64
31	MJ	10	M	A	(11/01/83) (16/02/83)	1:16
32	JN	15	M	I	(08/02/83) (16/02/83)	1:16
33	SH	7	M	I	(08/02/83) (16/02/83)	1:4
34	SB	3	M	M	(08/02/83) (16/02/83)	1:16
35	DB	2	M	I	(09/08/83) (25/08/83)	1:256
36	DS	6	M	I	(14/02/84) (17/02/84)	1:64

*Based on Clinical Findings and response to Penadur

**All the patients were classified in the Recent Phase

ANNEX 2

RESULTS OF SEROLOGICAL SURVEY IN SURINAM,
1976 - 1981 (*)

Area	No Sera Examined	Year	No VDRL pos.	%			%		
				VDRL + TPHA	VDRL + TPHA + Titre 1:16	No VDRL	VDRL + TPHA	VDRL + TPHA + Titre 1:16	No VDRL
1. Sarramacca	969	1976	212	22%	ND	-	-	-	-
Sarramacca	111	1981	5	4.5%	ND	-	-	-	-
2. Paramam	1500	1979	80	5.3%	14	1	-	-	-
3. Blawgrond	1383	1980	14	2.46%	3	0.22	-	-	-
4. Commewijne	1469	1981	83	5.65%	23	1.57	-	-	-
5. Nickerie	300	1981	40	1.33%	2	0.66	-	-	-
6. Rotopasie	204	1980	10	ND	4.9	2	-	-	-
Lafanti	229	1980	68	ND	29.19	18	-	-	-
Kambalao	64	1980	12	ND	18.45	2	-	-	-
Dam	43	1980	14	ND	32.56	1	-	-	-
Manlobi	235	1980	99	ND	41.12	17	-	-	-
TOTAL	6507		667	10.2%		40	-	-	-

(*) Dr. S. Sadqhl - Paramaribo

Venezuela - Period of visit: 22-28 July, 1988

Activities:

- 25 July The first day we visited the Pan American Health Organization Representation and the Institute of Biomedicine (Dr. Monzon).
- 26 July We visited the Division of Epidemiology at the Ministry of Health (Dr. R. Travieso) and the National Institute of Venereology (Dr. R. Medina).
- 27 July In the morning, we visited the Department of Dermatology at the Faculty of Medicine - Universidad Central (Dr. A. Celebotta).
- 28 July Visit to Dr. O. Reyes, Chief of the Department of Dermatopathology, at the Institute of Biomedicine.
- 29 July Departure to Panama*

General information about yaws and pinta in Venezuela.

Yaws

According to all the doctors interviewed, no patient with yaws has been seen for more than ten years. Dr. R. Medina, a well known specialist in STD and endemic treponematoses states that yaws was eradicated in Venezuela and all the dermatologists interviewed agreed with him. No case of yaws has been registered at the Division of Epidemiology at the Ministry of Health in the last ten years.

Pinta

According to Dr. Medina, pinta was endemic in 16 of the 20 Venezuelan states; it was highly endemic in the Territory of Amazonas, south Apure in Zulia; intermediate and low prevalences were observed in Barinas, Miranda, Aragua, Carabobo, Bolívar, Lara, Portuguesa, Cojedes, Trujillo, Falcon, Monagas, Merida and Delat Amacuro.

At the Department of Epidemiology a total of 219 cases were registered in the period from 1967 to 1985 (Annex 3). Most of the cases came from the Territory of Amazonas, Guarico and Zulia. The incidence rates per year are also included in Annex 2. The highest incidence rate was registered in Amazonas. Rates for the whole country varied from 0.18 cases per 100,000 population in 1967 to 0.03 in 1985.

* Even though we had requested reservations from Caracas to Bogotá since 8 July, 1988, we were unable to obtain a confirmation or get a seat on any flight to Bogotá. For this reason, the PAHO Office in Caracas recommended a change in routing, Caracas-Panama. Another important factor in my change of itinerary is that there were no hotel rooms available in Caracas.

In spite of the decline of registered cases most of the dermatologists interviewed and especially Dr. R. Medina (who has been working in nearly all the endemic areas of Venezuela) reports that it still may be important among indian tribes living in the Territory of Amazonas and the southern part of Bolivar State.

Conclusions

1. Yaws seems to be eradicated from Venezuela.
2. Pinta is still diagnosed in some states of Venezuela and may represent a problem among Indian tribes from the Territory of Amazonas and the southern part of Bolivar State.

Recommendation

Surveys among indian tribes living in the Territory of Amazonas and the southern part of Bolivar State, mainly for the evaluation of the present situation of pinta in Venezuela is recommended.

[illegible]

[illegible][illegible]

PARTE. CASOS Y MUERTES. TASAS POR 100.000 HABITANTES
VENECUOLA. AÑOS 1975-1978

ENTIDADES FEDERALES	1975			1976			1977			1978		
	CASOS	TASAS	MUERTES	CASOS	TASAS	MUERTES	CASOS	TASAS	MUERTES	CASOS	TASAS	MUERTES
VENEZUELA...	5	0,04	-	15	0,12	-	6	0,05	-	3	0,02	-
DISTRITO FEDERAL (1)	-	-	-	-	-	-	-	-	-	-	-	-
ESTADOS:												
ANZOATEGUI	-	-	-	-	-	-	-	-	-	-	-	-
APURE	-	-	-	-	-	-	-	-	-	-	-	-
ARAGUA	-	-	-	1	0,16	-	-	-	-	-	-	-
BARINAS	-	-	-	-	-	-	-	-	-	-	-	-
BOLIVAR	-	-	-	-	-	-	1	0,21	-	1	0,21	-
CARABOBO	1	0,13	-	-	-	-	-	-	-	-	-	-
COJEDOS	-	-	-	-	-	-	-	-	-	-	-	-
FALCON	1	0,22	-	-	-	-	1	0,21	-	-	-	-
GUARICO	-	-	-	-	-	-	-	-	-	1	0,26	-
LARA	-	-	-	-	-	-	-	-	-	-	-	-
MERIDA	-	-	-	1	0,25	-	1	0,25	-	-	-	-
MIANABA (2)	-	-	-	-	-	-	-	-	-	-	-	-
MONAGAS	-	-	-	-	-	-	-	-	-	-	-	-
NUEVA ESPARTA	-	-	-	4	1,97	-	-	-	-	-	-	-
PORTUGUESA	-	-	-	-	-	-	-	-	-	-	-	-
SUCRE	3	0,59	-	3	0,57	-	-	-	-	-	-	-
TACHIRA	-	-	-	-	-	-	-	-	-	-	-	-
TRUJILLO	-	-	-	-	-	-	2	0,46	-	-	-	-
YAMACUY	-	-	-	1	0,39	-	-	-	-	1	0,37	-
ZULIA	-	-	-	3	0,20	-	1	0,06	-	-	-	-
TERITORIOS FED.:												
AMAZONAS	-	-	-	1	4,02	-	-	-	-	-	-	-
DELTA AMACURO	-	-	-	1	1,85	-	-	-	-	-	-	-

1) INCLUYE EL DTTO. SUCRE.

2) EXCLUYE EL DTTO. SUCRE.

CARTE. CASOS Y MUERTES. TASAS POR 100 000 HABITANTES
VENEZUELA. AÑOS 1979-1982

ESTADOS FEDERALES	1979			1980			1981			1982		
	CASOS	TASAS	MUERTES	CASOS	TASAS	MUERTES	CASOS	TASAS	MUERTES	CASOS	TASAS	MUERTES
VENEZUELA....	3	0,02	-	6	0,04	-	17	0,11	-	8	0,05	-
ESTADO FEDERAL (1)	-	-	-	-	-	-	-	-	-	-	-	-
ESTADOS:												
ZOATEGUI	-	-	-	-	-	-	-	-	-	-	-	-
PURE	1	0,49	-	2	0,96	-	-	-	-	1	0,46	-
AGUA	-	-	-	-	-	-	-	-	-	-	-	-
ARINAS	1	0,34	-	-	-	-	7	1,97	-	-	-	-
OLIVARRA	-	-	-	-	-	-	1	0,14	-	-	-	-
ARADOBBO	-	-	-	-	-	-	1	0,09	-	2	0,17	-
OJEDOS	-	-	-	-	-	-	-	-	-	-	-	-
ALCON	-	-	-	1	0,20	-	-	-	-	1	0,19	-
VARICO	-	-	-	3	0,74	-	3	0,74	-	-	-	-
MARA	1	0,12	-	-	-	-	-	-	-	-	-	-
CAIDA	-	-	-	-	-	-	-	-	-	-	-	-
MANADA (2)	-	-	-	-	-	-	-	-	-	3	0,59	-
LONAGAS	-	-	-	-	-	-	5	0,73	-	-	-	-
UEVA ESPARTA	-	-	-	-	-	-	-	-	-	-	-	-
ORTUGUESA	-	-	-	-	-	-	-	-	-	-	-	-
ICAE	-	-	-	-	-	-	-	-	-	1	0,16	-
ACHIRA	-	-	-	-	-	-	-	-	-	-	-	-
QUJILLO	-	-	-	-	-	-	-	-	-	-	-	-
ARACUY	-	-	-	-	-	-	-	-	-	-	-	-
ULIA	-	-	-	-	-	-	-	-	-	-	-	-
ESTADOS FED.												
MANONAS	-	-	-	-	-	-	-	-	-	-	-	-
OCLTA AMACURO	-	-	-	-	-	-	-	-	-	-	-	-

1) INCLUYE EL DTTO. JUERE

[illegible]

Ressources additionnelles nécessaires

Ressources humaines

Dermatologues	À déterminer avec la participation de la Société H.D.
Médecin de Santé Publique	À déterminer avec la A.S.P.E.A.
Infirmières	5 une par commune les plus démunies
Auxiliaires	35 une par section communale disposant d'agent de santé et deux par section ne disposant pas d'agent de santé
Chauffeur	1 pour la commune de l'Anco d'Ainsult
Techniciens de labo	À déterminer

Ressources Matérielles

Transport

Véhicules tout terrain

Où il y a l'Anco d'Ainsult

un à Jérémie

un au service d'Épidémiologie Rég.

Matériels cliniques et paracliniques

Seringues

Aiguilles

Tube en verre

Réactifs de labo

Antibiotiques

Financières: Frais de séjour du personnel en déplacement

Stratégie:

Une équipe composée de

Dermatologues

Médecin de Santé Publique

Infirmières

Auxiliaires

Agent de Santé

procédera à l'enquête épidémiologique qui constituera le débrayage de la campagne.

Activités: Consultation

Prise de sang

traitement

Éducation, Formation Personnel.

Ce sera la première phase qui sera exécutée par le personnel disponible avec la participation de la SHD et de la A.S.P.T.A. La deuxième phase c'est à dire la surveillance de la population qui comprendra

la diagnostic précoce

le traitement par le pers. entraîné

l'éducation

l'information

nécessitera un personnel additionnel.

La première phase s'exécutera en un ou deux points de concentration.

Tandis que la deuxième sera exécutée par des équipes fixes au niveau des sections communales soient un agent de santé et un ordonnanceur ou deux ordonnanceurs pour les sections dépourvues d'agent de santé.

La surveillance durera six mois.

Besoins financiers nécessaires

1- Frais de séjour des dermatologues

6 d x 175 x 5 = 5.250 0

2- Frais de séjour épidémiologiste

6 sp x 175 x 5 = 5.250 0

3- Frais de séjour Infirmières

6 inf x 175 x 5 = 5.250 0

4- Frais de séjour chauffeurs

3 c x 175 x 6 = 3.150 0

5- Paiement Personnel additionnel

5 inf x 1.750 x 6 = 52.500 0

35 Aux x 1.000 x 6 = 210.000 0

Coût Matériel et Médicament

À déterminer

Carburant

4 x 500 x 6

= 12.000 0

Coût Total: 293.400 gourdes plus les médicaments et le matériel
clinique

Coût mensuel 40.000 gourdes.

District: Sérémie Commune: Dame-Marie Village: Mandou Date: 27/04/88

# Menage	#	Nom-Prénom	Parenté	Age	Sexe	Dgn Clinique	VDRL	autre	
1	1-1	Bernadette Louis Jeune	Mère	43 ans	f		—		
	1-2	Vanel Ls. Jeune	fils	9	m	Pian	16		
	1-6	Maxo ^{MAXO} Frederic Frederic	fils	11	m		—		
	1-3	Lorrete Ls. Jeune	sœur	38	f		—	ELISA	(+)
	1-4	Edith Frederic	filie	15	f		—		
	1-5	Allan Ls. Jeune	fils	9	m		—		
2	2-1	Elva Ls. Jeune	Mère	92	f				
	2-2	Socelyn Ls. Jeune	Petit-fils	27	m				
	2-3	Solange Ls. Jeune	filie	58	f		—		
	2-4	Garry Ls. Jeune	Arrière Petit-fils	2	m		—		
	2-5	Enise Picard	Belle-fille	22	f		—		
	2-6	Socelyne Ls. Jeune	Arrière Petite-fille	2 1/2 mois	f		—		
	2-7	Alfred Ls. Jeune	fils	50	m		—		
	2-8	Yves Hadd Ls. Jeune	Arrière Petit-fils	5	m				
	2-9	Marie Ange Ls. Jeune	Arrière Petite-fille	28	f		—	ELISA	(+)
	2-10	Ernso Ls. Jeune	Arrière Petit-fils	5 mois	m				
3	3-1	Marie Bernard	Mère	28	f		—		
	3-2	Wilnès Valcin	fils	8	m		8		
	3-3	Lorna Valcin	filie	10	f	Pian	32		
	3-4	Edelin Valcin	fils	4	m				

District: Jérémie... Commune: Dame-Marie... Village: Mandonou. Date: 27/4/88

# Menage	#	Nom Prenom	Parenté	Age	Sexe	Dgn Clinique	VDEL	Signature
	3-5	Micheline Valcin	frile	11	f		—	
	3-6	Mervin Valcin	fils	15	m			
4	4-1	M ^{re} Lessure Calixte	mère	30	f			
	4-2	Prince Calixte	fils	4	m		—	
	4-3	Wesley Calixte	fils	6	m			
5	5-1	Roseline Cazy	Cousine	20	f			
	5-2	Ferlan Etienne	cousin	4	m	Pian	16	
6	6-1	Odette Romeus	mère	29	f		—	
	6-2	Renel Lorcine	fils	1an	m			
	6-3	Fancile Lorcine	filie	4	f			
	6-4	Rica Lorcine	filie	5	f		—	
→	6-5	Quel Lorcine	fils.	7	m		—	
7	7-1	Mertzélie Lamisére	Gr ^{de} mère	52	f			
	7-2	Anise Michel	Petit-fille	5	f	Pian	16	
	7-3	Emose Michel	Petit-fille	7	f			
	7-4	Méker Michel	Petit-fils	11	m			
8	8-1	M ^{re} Inclaud Emile	mère	21	f			
	8-2	Joanel Emile	fils	8m	m			
9	9-6	Alphonse Lorcine	Père	39	m	Pian	No Blood.	
9	9-1	Brunette Valcin	mère	19	f			

Panama

Period of visit - 29 July - 9 August 1988

Activities

- 29 July In the morning we visited the PAHO Representation.
- 1 August We visited the Sub-Director of the Department of Epidemiology at the Ministry of Health (Dr. Washington Lum).
- 2 August Interview with Dr. Enrique Castañeda, Chief of the Division of Epidemiology and search for published papers about pinta and yaws.
- 3 August Interview with Dr. Egberto Espinoza (Sub-Director of the Ministry of Health) and participation in a meeting with persons responsible for the main program in the country and researchers from the Gorgas Memorial Laboratory (an institute for investigation in the area of endemic tropical diseases).
- 4 August Interview with 11 dermatologists, during a monthly meeting of the Dermatology Society of Panama.
- 5 August Interview with Dr. Alberto Espinoza at the dispensary for leprosy in Panama City. This doctor is responsible for the leprosy control program in Panama and travelled around the country during the yaws campaign.
- Interview (by phone) with Dr. Didio Rodriguez (Hospital Nicolas Solano - Chorrera), a general practitioner interested in leishmaniasis who travels to different places in the interior of Panama.
- 8 August Interview with Dr. Jorge Rozette, a general practitioner who worked in Chorrera.
- Interview with Dr. Melva Soares, a dermatologist who is working in Chorrera.
- 9 August We visited Roland Sáenz at Gorgas Memorial Laboratory.

General Information - Yaws

With the exception of 19 cases reported in the period from 1964-67 and 1977-80 (Memoria del Ministerio de Salud, octubre 1969 and Departamento de Epidemiología) all the doctors interviewed said they did not see a case of yaws in the last eight years.

One point that is notable is that doctors in Panama are obliged to spend one year in the interior.

The three main Indian tribes in Panama seem to be well known and health infrastructure and health services seem to be good in the country.

We were lucky to have the possibility to talk with most of the dermatologists working in Panama. A discussion was raised about the cases of yaws diagnosed in the period from 1977-80. There were doubts about the diagnosis: yaws or syphilis?

Pinta: According to Dr. Alberto Espinosa and the dermatologists interviewed, pinta has not been diagnosed in Panama.

Conclusions

1. Yaws seems to have been eradicated in Panama.
2. Pinta has never been diagnosed in Panama.

Recommendation - None

INFECTIOUS DISEASES REPORT, MINISTRY OF HEALTH, PANAMA

Enfermedad	1964		1965		1967 ^a	
	No.	Tasa	No.	Tasa	No.	Tasa
Tuberculosis	1,549	132.2	1,354	108.6	425	32.0
Sífilis	239	19.0	351	28.1	163	12.2
Infección genocálica	625	51.8	401	32.1	462	34.7
Tifoidea y paratifoidea	38	3.1	23	1.8	9	0.6
Amibiassis	731	60.6	711	57.0	263	19.8
Difteria	92	7.6	16	1.2	35	2.6
Tosferina	1,001	83.0	1,413	113.4	1,178	88.7
Sarampión	481	39.9	942	75.6	629	47.3
Tétanos	129	10.7	132	10.5	202	15.7
Poliomielitis	10	0.8	7	0.5	48	3.6
Lepra	8	0.6	7	0.5	-	-
Leishmaniasis	183	15.1	93	7.4	34	2.5
Anquilostomiasis	2,753	228.4	3,521	282.5	1,428	107.5
Disenterías, todas formas	470	39.0	426	43.1	369	27.7
Hepatitis infec.	185	15.3	401	32.1	-	-
Frambesia	8	0.6	7	0.5	1	0.7

^a De enero-agosto

- Datos no disponibles.

REPUBLICA DE PANAMA
MINISTERIO DE SALUD

DEPARTAMENTO DE EPIDEMIOLOGIA

EPIDEMIOLOGICO DE CASOS CONFIRMADOS DE ENFERMEDADES TRANSMISIBLES, POR EDAD Y SEXO DURANTE LA SEMANA

TERMINADA EL _____ DE _____ DE 19____

Tuberculosis 107

ENFERMEDAD	CO. DE GO.	SEXO	TOTAL	GRUPOS DE EDAD						
				0-5m	6-11m	1	2	3	4	5-9
<i>1977</i>	1	TOTAL								
	2	MASC.								
<i>1979</i>	1	TOTAL								
	2	MASC.								
<i>1980</i>	1	TOTAL								
	2	MASC.								
<i>1981</i>	1	TOTAL								
	2	MASC.								
<i>1982</i>	1	TOTAL								
	2	MASC.								
<i>1983</i>	1	TOTAL								
	2	MASC.								
<i>1984</i>	1	TOTAL								
	2	MASC.								
<i>1985</i>	1	TOTAL								
	2	MASC.								
<i>1986</i>	1	TOTAL								
	2	MASC.								
<i>1987</i>	1	TOTAL								
	2	MASC.								
<i>1988</i>	1	TOTAL								
	2	MASC.								
<i>1989</i>	1	TOTAL								
	2	MASC.								
<i>1990</i>	1	TOTAL								
	2	MASC.								
<i>1991</i>	1	TOTAL								
	2	MASC.								
<i>1992</i>	1	TOTAL								
	2	MASC.								
<i>1993</i>	1	TOTAL								
	2	MASC.								
<i>1994</i>	1	TOTAL								
	2	MASC.								
<i>1995</i>	1	TOTAL								
	2	MASC.								
<i>1996</i>	1	TOTAL								
	2	MASC.								
<i>1997</i>	1	TOTAL								
	2	MASC.								
<i>1998</i>	1	TOTAL								
	2	MASC.								
<i>1999</i>	1	TOTAL								
	2	MASC.								
<i>2000</i>	1	TOTAL								
	2	MASC.								
<i>2001</i>	1	TOTAL								
	2	MASC.								
<i>2002</i>	1	TOTAL								
	2	MASC.								
<i>2003</i>	1	TOTAL								
	2	MASC.								
<i>2004</i>	1	TOTAL								
	2	MASC.								
<i>2005</i>	1	TOTAL								
	2	MASC.								
<i>2006</i>	1	TOTAL								
	2	MASC.								
<i>2007</i>	1	TOTAL								
	2	MASC.								
<i>2008</i>	1	TOTAL								
	2	MASC.								
<i>2009</i>	1	TOTAL								
	2	MASC.								
<i>2010</i>	1	TOTAL								
	2	MASC.								
<i>2011</i>	1	TOTAL								
	2	MASC.								
<i>2012</i>	1	TOTAL								
	2	MASC.								
<i>2013</i>	1	TOTAL								
	2	MASC.								
<i>2014</i>	1	TOTAL								
	2	MASC.								
<i>2015</i>	1	TOTAL								
	2	MASC.								
<i>2016</i>	1	TOTAL								
	2	MASC.								
<i>2017</i>	1	TOTAL								
	2	MASC.								
<i>2018</i>	1	TOTAL								
	2	MASC.								
<i>2019</i>	1	TOTAL								
	2	MASC.								
<i>2020</i>	1	TOTAL								
	2	MASC.								
<i>2021</i>	1	TOTAL								
	2	MASC.								
<i>2022</i>	1	TOTAL								
	2	MASC.								
<i>2023</i>	1	TOTAL								
	2	MASC.								
<i>2024</i>	1	TOTAL								
	2	MASC.								
<i>2025</i>	1	TOTAL								
	2	MASC.								
<i>2026</i>	1	TOTAL								
	2	MASC.								
<i>2027</i>	1	TOTAL								
	2	MASC.								
<i>2028</i>	1	TOTAL								
	2	MASC.								
<i>2029</i>	1	TOTAL								
	2	MASC.								
<i>2030</i>	1	TOTAL								
	2	MASC.								

Haiti - Period of visit: 10-14 August 1988.

Activities:

11 August Visit to the PAHO Office Representation and interview with Dr. Widy-Wirski (epidemiologist, AIDS consultant, expert in STD and trepanomatoses); Dr. B. Liauteaud (dermatologist) and Dr. M. Pamphile (Director of Higiène Publique at Ministry of Health).

12 August Visit to Dr. G. Boyer at Centre Nationale de Dermatologie.

At 10 a.m. a visit to Les Cayes, an area suggested to be visited by Dr. Widy-Wirski, was scheduled.

14 August Departure to Miami.

General Informations - Yaws

Dr. Widy-Wirski recently found 28 patients with positive serology (VDRL) during a survey for AIDS in the district of Jeremie (Annex 1 and 2). According to the clinical observations of Dr. Widy-Wirsky (Annex 2) most of the patients presented scabies and the lesions of yaws were regressing. He also found a great frequency of macular-palular lesions on palmo-plantar regions and according to him this was a very characteristic aspect for the diagnosis of yaws (Annex 1, pag. 3). Another aspect emphasized was the age: 50% of the patients were less than 15 years old.

The two dermatologists interviewed (Drs. Boyer and Liauteaud) were skeptical about the diagnosis of yaws in these patients, mainly because of the absence of typical lesions. They think these patients could be cases of syphilis.

Dr. Boyer, a professor of dermatology at the local Faculty of Medicine who worked in the campaign for eradication of yaws in Haiti, said he has not seen a case of yaws for many years.

At the Ministry of Health, I could find no information about endemic trepanematoses.

Pinta

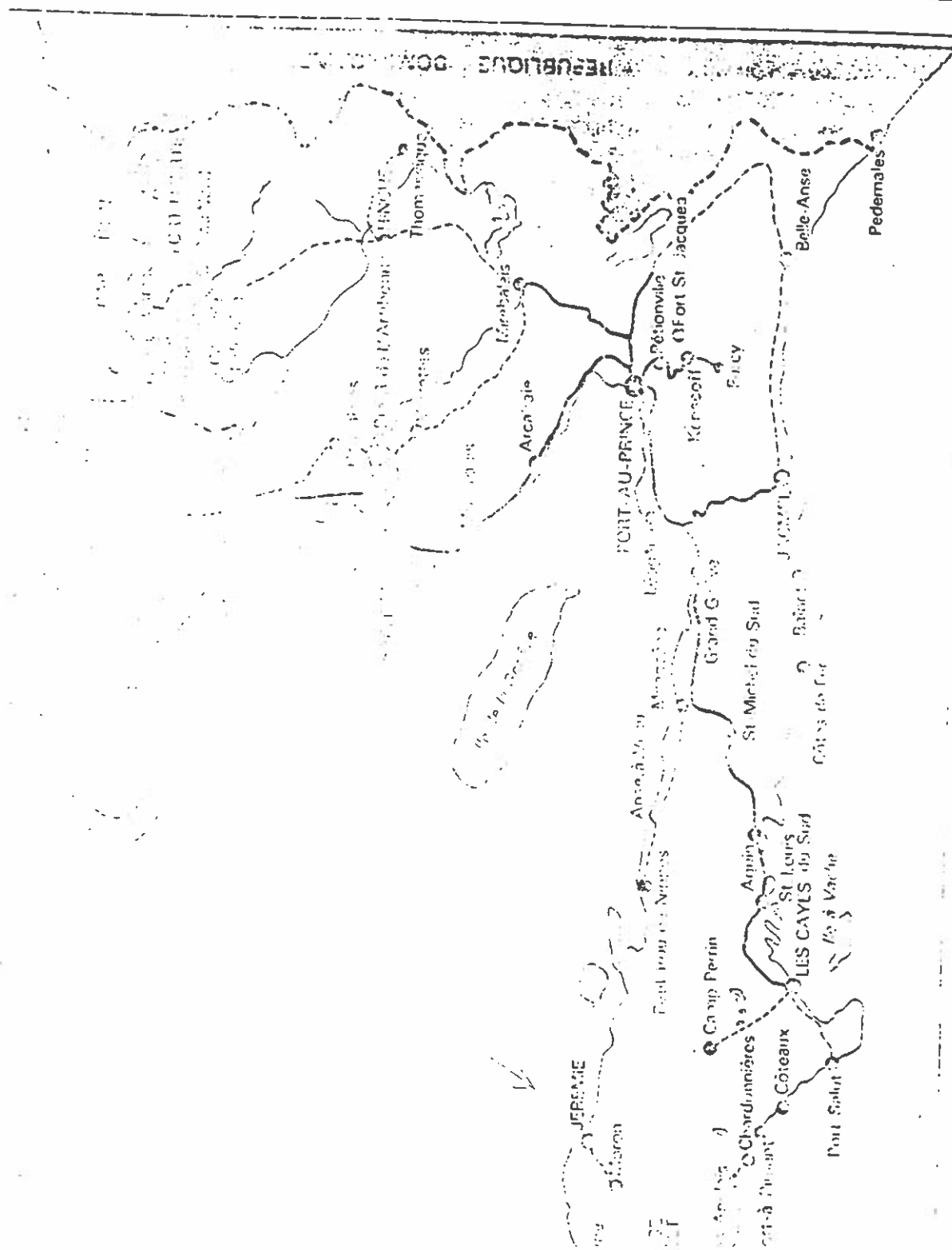
According to Dr. Boyer a foci of pinta, known by a local name of "bussarole", existed in the area of Paine de Cul-de-Sac. He had no recent information about the present situation of pinta.

Conclusions

1. The possibility of a yaws pocket exists in Haiti.
2. There is no information about the eradication of pinta in the country.

Recommendations

A yaws survey at the district of Jeremie should be a top priority. Dr. Bijou's project (Annex 3) should be considered.



ENQUETE SUR LE PIAN DANS LA REGION SANITAIRE DU SUD

DISTRICT: JEREMIE

COMMUNE : DAME MARIE

1. Village: Mandou Date: 27 avril 1988

Population de village: environ 120 personnes dont 50 enfants de moins de 15 ans

17 ménages ont été interrogés et 62 personnes ont été examinées.

18 cas de pian évolutif récents ont été diagnostiqués, dont 11 cas chez les plus de 15 ans. (10 de ces cas ont pu être confirmés par VDRL*). Le sang pour le VDPL a été systématiquement prélevé sauf chez les bébés de moins de 2 ans.

A cause de l'hémolyse et de la disparition des échantillons, les sérums de seulement 28 personnes ont pu être examinés pour les anticorps anti-tréponémiques au Laboratoire Nationale de Recherche à Fort-au-Prince.

SEROLOGIQUE TREPONEMIQUE

POPULATION	NO. EXAMINES	NO. SEROPOSITIFS	%
moins de 15 ans	18	9	50,0
plus. de 15 ans	10	2	20,0
Total	28	11	39,2

* Test utilisé: Venereal Disease Research Laboratory (VDRL).

2. Village: La Hatte

Date: 28 avril 1988

Dans ce village, la population d'une école (environ 100 écoliers) ainsi que leurs parents ont été examinés. Environ 100% de cette population ont des lésions de la gale.

Deux cas de pian ont été dépistés cliniquement et confirmés par VDRL: un cas chez une écolière de 17 ans et un autre cas de pian tardif chez une mère de 31 ans (son fils présentait une dyschromie caractéristique pour les lésions guéries à la suite d'antibiothérapie) et il s'avérait sero-positif.

Les examens sérologiques ont permis de dépister 2 cas de tréponémotose latente chez les plus de 15 ans et un cas chez les moins de 15 ans.

3. Village: Terre Rouge

Date: 28 avril 1988

Dans ce village nous avons examiné 3 enfants qui ne présentaient pas de lésions cliniques mais qui ont été traités récemment par le pian. Aucune de ces personnes n'a eu les anticorps tréponémiques.

Conclusions

Sur le plan écologique, la région visitée est propice à l'endémicité pianique.

Nous n'avons pas pu observer des lésions caractéristiques du pian récent (pianomes) étant donné que la plupart des cas ont été pré-traités avec de la pénicilline (malheureusement, il s'agit de la pénicilline procaine qui n'assure pas le niveau sérique tréponémicide pendant le temps voulu).

Les lésions pianiques observées ont été assechés et en cours de guérison ou ^{de passage} à l'état latent. La présence quasi-totale de gale a rendu le diagnostic clinique du pian difficile. Assez souvent les papulo-macules caractéristiques au niveau plantaire ou palmaire ont été observées.

Il existe dans la région des officiers sanitaires très motivés, bien que le matériel d'injection et la Pénicilline Benzatine manquent.

A la suite de la mission, le District Sanitaire de Jérémie a reçu le matériel et la Pénicilline Benzatine nécessaire pour TMS (traitement de masse sélective).

Il faudra tout de même prévoir le TMT (traitement de masse totale) à Mandou et le TMJ (traitement de masse juvénile) à la Hatte, suivie par une phase de surveillance.

Ar Bijou
Drechen Region du Sud
2 MONTAS
Drechen Adjoint

ANNEX 2

Epidémie de Plan

Localisation: Département de la Grande Anse

Nombre de communes affectées.

Dame Marie

Charbollen

Noron

Jérémie

Les villes et les sections communales

Il émanera d'un comité épidémiologique

Cette enquête sera menée conjointement par le VPP et la société
Nationale de Dermatologie elle consistera en:

1- Diagnostic clinique dermatologique

2- Prises de sang pour VIH

3- Le traitement des cas diagnostiqués

La surveillance épidémiologique de la zone sera établie dans un
deuxième temps elle comprendra:

1- Une période d'activités intensives détection des cas et
traitement (activités de terrain)

2- Une période de surveillance passive, détection de cas
dans les différentes cliniques et institutions de santé.

Communes intéressées pour la Surveillance		40% (0-15 ans)
Anse d'Ananité	21731 hab	8.692
Dame Marie	26294 hab	10.517
Charbollen	15600 hab	6.272
Noron	23016	9.206
Jérémie	79764	31.905
Bonbon	7685 hab	3.074
Abriots	28044	11.217

Nombre de Sections communales:

31 Sections communales

Distribution de la population

Villes

35751 hab

Sections communales

166463 hab

Ressources disponibles au niveau du District

Physiques

Hopital	1
Centre de santé avec lit	1
Centre de santé sans lit	1
Dispensaire	9

Humaines

Médecins	14
Infirmières	13
Auxiliaires	76
Agent de Santé	25
Statisticien	1
Personnel Administratif	quantité suffisante
Auxiliaire Statisticien	2
Technicien de labo	2

Ces ressources sont disponibles au niveau du district territorial de Jérémie et réparties sur l'aire considérée.

Au niveau Régional

Médecin Épidémiologiste	1
Autres Médecins de Santé Publique	2
Médecin licencié	1
Infirmière hygiéniste	2
Statisticien	1
Personnel administratif	quantité suffisante.

District: Commune: Village: **MANDOU** Date: **27/04**

# Mariage	#	Nom Prénom	Parenté	Age	Sexe	Dgn Clinique	VDEL	autre	
9	9-2	Junior Valcin	fils	3	m	Grave			
10	10-1	Mimose Lardena	mère	30	f				
	10-2	Lucienne St Pierre	filie	6m	f				
	10-3	Micheline Lardena	filie	5	f				
	10-4	Mérite Lardena	frère	18	m	Pian			
11	11-1	Murielle Valcin	mère	26	f				
	11-2	Gerson Valcin	frère	18	m	Pian			
	11-3	Kenson Nicolas	fils	1an	m				
12	12-1	Reynold Hippolon	Frère	18	m	Pian	8		
	12-2	Bancel Jean	frère	14	m	Pian	16		
9	9-3	Fernande Valcin	soeur	14	f	Pian			
	9-4	Pierre-Richard Valcin	frère	17	m	Pian			
13	13-1	Rosalie Louis	mère	18	f	Pian	32		
	13-2	Vivrose Charles	filie	2	f	Pian	16		
14	14-1	Sylvain Sylvestre	Père	31	m				
	14-2	Azenal Sylvestre	fils	8	m	Pian	32		
15	15-1	Morissette Michel	Père	30	m				
	15-2	Edris Michel	fils	8	m	Pian	16		
16	16-1	Denique Belizaire	fils	13	m	Pian	-		
	16-2	Agnes Belizaire	mère	-	f				

[illegible][illegible]

District: JEREMIE ... Commune: DAME-HENRI Village: La Hatter Date: 28/04.

# Menage	#	Nom-Prénom	Parenté	Age	Sexe	Dgn Clinique	VDRL	autre	
18	18-1	Rose HENRI Bélony	Ecole	17	f	Pian	16	✓	
	18-2	Azor Bélony	Ecole	12	m	Cicatrice Doutense	-		
	18-3	Jita La Patrie	"	13	f	"	-		
	18-4	Roseline SEAN	"	13	f	"	1		
	18-5	Rose-Mita St Louis	"	17	f	"	-		
	18-6	Eunice Neptune	"	21	m	Gale	-		
	18-7	Jacellin SAVIS	"	7	m	Gale	-		
	18-8	ERMANA Rechasse	"	12	f	"	-		
	18-9	Gertrude Poince	"	18	f	Cicatrice Doutense	-		
	18-10	Myrtha Calliste	"	17	f	"	-		
	18-11	Linosé SAMÉDY	"	18	f	"	-		
	18-12	Boice CASSANJOR	"	12	m	"	-		
	18-13	Yvresse Eustache	"	13	f	"	-		
	18-14	FRANKY BEANVOIR	"	17	m	Gale	16	✓	
	18-15	Jacob SEMENVIL	"	16	m	Cicatrice Doutense	1		
19	19-1	Dieuvent Pierre	Père	59	m	"	-		
20	20-1	Céphaxor BEANVOIR	Père	50	m	"	-		
21	21-1	Vivienne St Louis	Mère	31	f	gale macules plaquettées	16		
	21-2	Pièce Prince DENIVAL	Fils	6	m	gale Dyschromie Pian	-		

Mexico - Period of visit: 15-20 August 1988.

Activities

- 15 August Mexico City. We visited the Department of Epidemiology (Dr. Alfonso G. Galván) and the Department of Preventive Medicine (Dr. Francisco Castellanos García).
- 16 August Moreria (State of Michoacán). We visited the State Health Secretary and discussed the past and present situation of pinta in the State of Michoacán with Dr. Eloy M. Corona (epidemiologist). We visited the Health Center Manuel G. Ureña and the main local patterns of dermatological diseases were analyzed together with Drs. S. A. Coréz (dermatologist and responsible for the leprosy control program in Michoacán) and F. Oropeza (dermatologist).
- 17 August Mexico City - Interview with Dr. O. Rodríguez, Director of Centro Dermatológico Pascua. During this interview Dr. O. Rodríguez explained the pattern of the dermatological diseases seen in the clinic, which receives patients from all over the country - over 80,000 outpatients in 1987.
- 18 August Oaxaca (State of Oaxaca). Visit to the State Health Secretary (Dr. Fernando G. Bustamante), Drs. E. Fernández (epidemiologist) and Dr. A. R. Esperanza (Supervisor of the Program for Transmissible Diseases).
- 19 August Mexico City. Interview with Dr. A. P. Viravete (Director of Instituto de Salubridad y Enfermedades Tropicales), Dr. O. V. Castrejón (field worker in the area of leishmaniasis and Chagas) and B. Arenas (epidemiologist at PAHO).
- 21 August Departure to Washington.

General Information

According to the census performed from 1960 to 1970, a total of 115,301 cases of pinta were diagnosed in nine States of Mexico (Annex 1 and 2). The main endemic states were: Guerrero, Michoacán, Chiapas and Oaxaca. A national campaign for the eradication of pinta was organized and by 1974 the total number of registered cases of pinta in Mexico declined to 130 (Annex 3). The campaign was deactivated in 1983. The information obtained at the Department of Epidemiology (Dr. Galván) reveals a total number of 248 patients in 1974 (Annex 4) and according to him a total of 92 patients were diagnosed in 1987 (Annex 4).

Dr. Castellanos, from the Department of Preventive Medicine and responsible for the pinta program does not agree with the data presented in Annex 4 and the possibility of old treated patients with residual achromic lesions was raised to explain the different numbers revealed in the statistics. Dr. Castellanos receives detailed information on the newly diagnosed patients in the interior. I saw a part of this information which was provided by the health personnel who make the diagnosis and it was quite good. The information contains data about the age, sex, origin of the case, clinical description of the lesions, classification, dose of penicillin and contacts treated.

In Mexico City, according to the information obtained at Centro Dermatológico Pascua and Instituto de Salubridad y Enfermedades Tropicales no case of pinta has been diagnosed for many years.

In Michoacán interviews with health personnel revealed that pinta was eradicated and the last two cases diagnosed in the State came from Guerrero.

Oaxaca seems to be the only State in Mexico that kept two auxiliaries specifically for the detection of pinta in rural areas of the State (Annex 5). From January to July of 1988 a total of 1950 persons were examined and five new cases of active pinta were found and 15 contacts were treated. According to Dr. Esperanza these auxiliaries are able to help the population in other health problems, e.g. diagnose tuberculosis and malaria and refer the patients.

It takes 8 hrs. to go to the nearest village in which the auxiliaries were working and for this reason it was impossible to go to the area.

Conclusions

1. Yaws has never been diagnosed in Mexico.
2. Pinta does not represent a public health problem now but it is still being diagnosed in places where active case finding is being done.

Recommendations

1. Review of the available statistics by the Mexican authorities in order to clarify the exact situation of pinta in the country.
2. The public health sector should develop a project to eradicate pinta. It seems that part of the well trained personnel that worked in the campaign are presently engaged in other programs (15 in the program of onchocerciasis in Oaxaca, for example). These auxiliaries could be of great help for a certain period, for example, for training other health personnel in the methodology of mass survey.

Cuadro 1

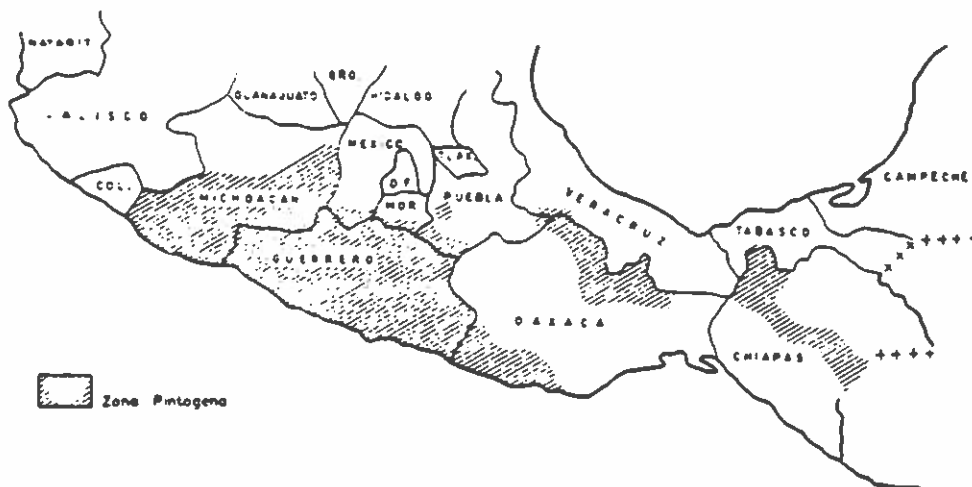
DISTRIBUCION DE CASOS DE MAL DEL PINTO SEGUN CENSO 1929-1931,
ETAPA DE EXPLORACION 1960-1970, AÑO 1974

<i>Entidad</i>	<i>Censo 1929-1931</i>		<i>Exploración (1960-1970)</i>		<i>1 9 7 4</i>	
	<i>Casos</i>	<i>%</i>	<i>Casos</i>	<i>%</i>	<i>Casos</i>	<i>%</i>
Guerrero	131.315	48.5	63.105	54.7	130	52.0
Michoacán	23.779	8.8	19.110	16.6	14	5.6
México	32.510	12.0	6.236	5.4	11	4.4
Oaxaca	37.126	13.7	8.943	7.8	23	9.2
Puebla	21.659	8.0	3.146	2.7	0	—
Chiapas	16.222	6.0	10.829	9.4	64	25.6
Morelos	1.651	0.6	3.550	3.1	0	—
Tabasco	4.000	1.5	139	0.1	2 *	0.8
Veracruz	326	0.1	243	0.2	6	2.4
T o t a l e s	268.678	99.2	115.301	100.0	250	100.0

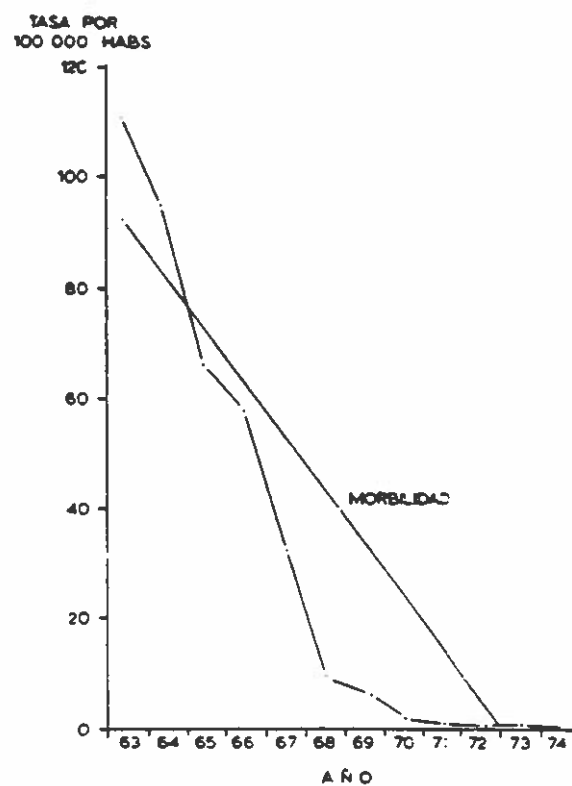
* Fue trabajado en enero 1975. Se incluye aquí para hacer completa la comparación.

FUENTE: Primer censo del mal del pinto y Campaña Nacional de Erradicación del Mal del Pinto.

GRAFICA 1.—Campana Nacional de Erradicación del Mal del Pinto.
Zonas pintógenas en la República Mexicana.



SALUD PÚBLICA DE MÉXICO

GRAFICA 2.—Morbilidad por Mal del Pinto.
Estados Unidos Mexicanos.—1963-1974.

FUENTE: Campaña Nacional de Erradicación

Brazil - Period of visit: 29 August - 4 September 1988.

Activities

Interview with the Director of the Faculty of Medicine (Prof. Arival de Brito) and search of the existing data about yaws in the State of Pará (Beleém).

Interview with Prof. Márico Lobo Jardim, Professor of Dermatology at the Federal Faculty of Medicine in Pernambuco; Prof. René G. Neves, Prof. of Dermatology at the Faculdade Fluminense de Medicina at the State of Rio de Janeiro; Professor Tancredo Furtado, Professor of Dermatology at the Federal University of Minas Gerais; Prof. Raymundo M. Castro, Professor of Dermatology at the University of Sao Paulo.

Interview with Dr. Maria Leide W. Oliveira, Director of the Department of Sanitary Dermatology at the Ministry of Health in Brasília.

General Information - Yaws

All the dermatologists interviewed know the clinical aspects of yaws very well and have treated cases of yaws in the past; they found no cases in the last years. At the Ministry of Health there is no information about yaws.

The possibility of small foci in the Northeast of the country was raised by Dr. M. Lobo.

The two main institutions responsible for public health services in the country ; Fundação Serviços de Saúde Pública (FSESP) and Superintendência de Campanhas de Saúde Pública (SUCA), do not have any information about yaws in the country.

Pinta

This endemic treponematosi s remained restricted to the western Amazon region in Brazil, especially among indian tribes in the States of Amazonas and Acre (Annex 1).

In the last 14 years we were able to visit most of the endemic areas and most of the patients were treated. The tentative of eradication was conducted together with the leprosy control program of the State of Amazonas.

Presently we can state that pinta does not represent a public health problem in Brazil and only rare caes can be found in very remote areas of the Western Amazon region (Annexes 2 and 3).

Conclusions

1. Yaws seems to have been eradicated in Brazil.
2. Pinta does not represent a public health problem in Brazil; only rare cases can be found in the country.

Recomendations

In order to clarify whether yaws has been eradicated in Brazil it would be important to carry out a yaws survey in some areas of the Northeast region of Brazil.

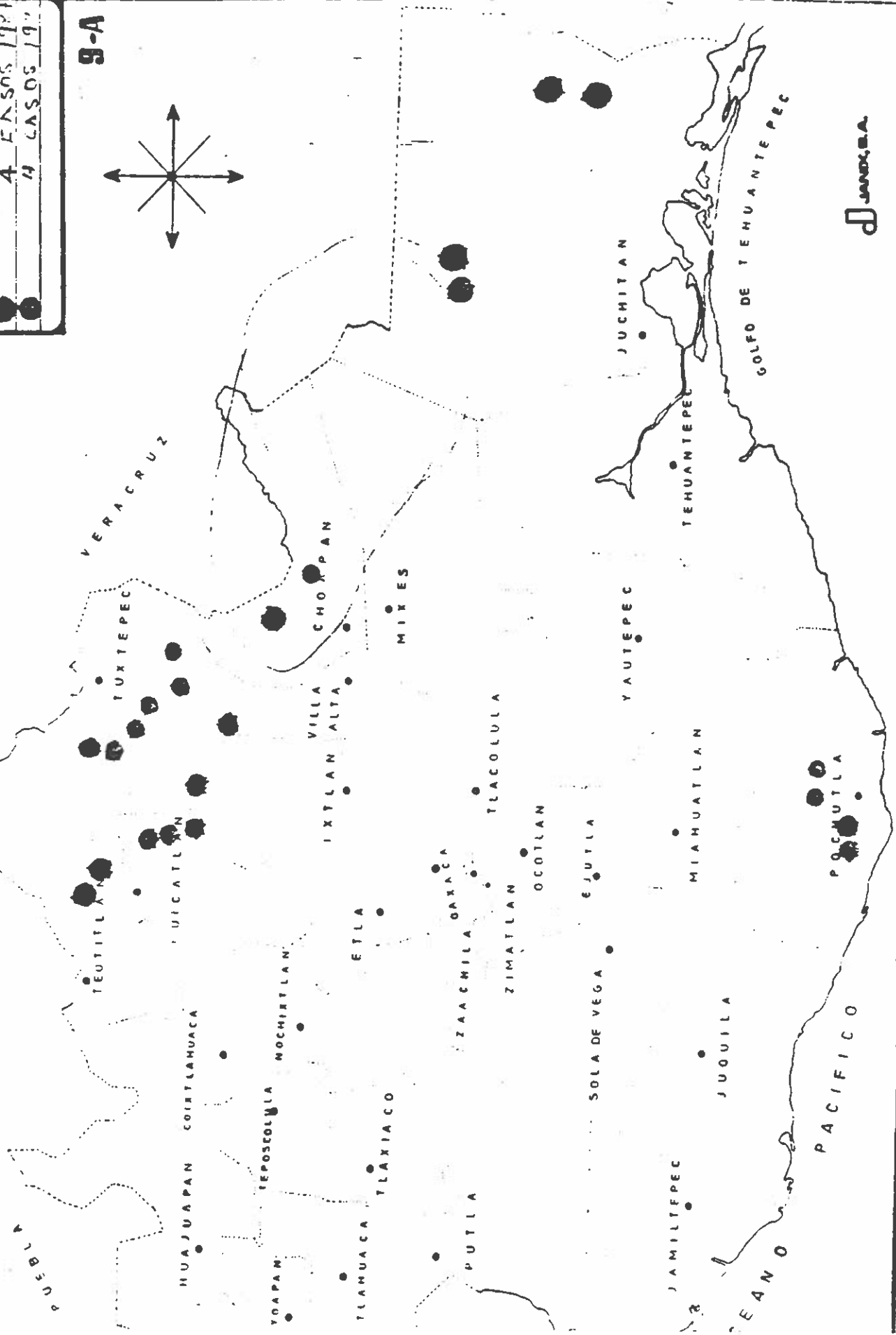
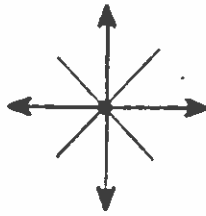
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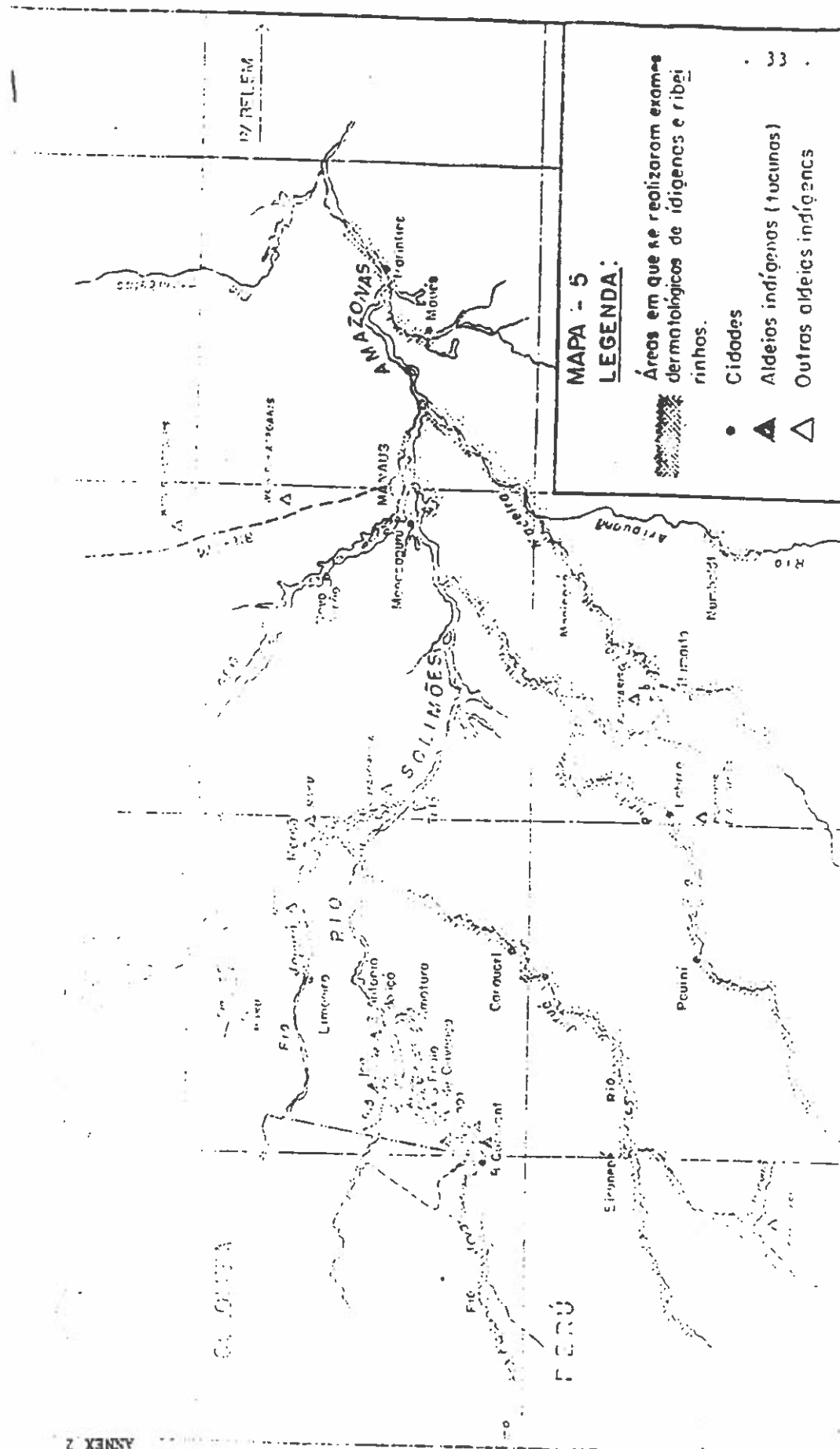
6 RADO

5	CASOS	178
6	CASOS	190
7	CASOS	185
8	CASOS	191
9	CASOS	194
10	CASOS	197

55



WAND, S.A.



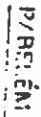
ANEX 3.1.1.1

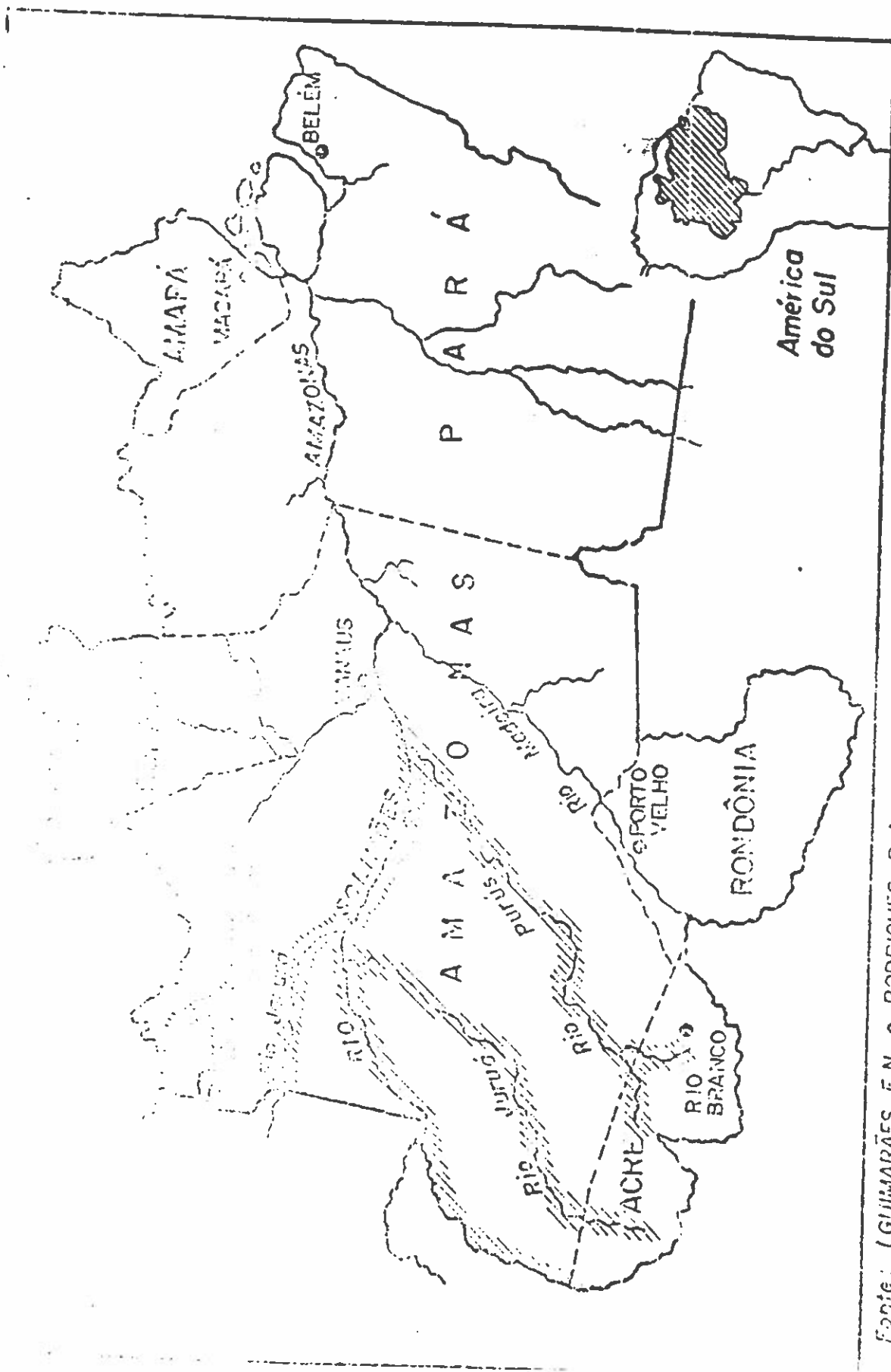
Porcentaje de mortalidad (Por 100,000 habitantes)

Porcentaje de mortalidad, 1970-1987

	1970-1979	1980-1987
1.1.1.1	1,447	0.2
1.1.1.2	1,447	1.0
1.1.1.3	1,447	0.2
1.1.1.4	1,447	0.7
1.1.1.5	1,447	0.7
1.1.1.6	1,447	0.2
1.1.1.7	1,447	0.2
1.1.1.8	1,447	0.2
1.1.1.9	1,447	0.1
1.1.1.10	1,447	0.0
1.1.1.11	1,447	0.1
1.1.1.12	1,447	0.1
1.1.1.13	1,447	0.1
1.1.1.14	1,447	0.0
1.1.1.15	1,447	0.0
1.1.1.16	1,447	0.1
1.1.1.17	1,447	0.2
1.1.1.18	1,447	0.1

Porcentaje de mortalidad, General de Epidemias, S. B. N.





Fonte: (GUIMARAES, F.N. e RODRIGUES, B.A., o puru-puru na Amazônia, 1948).

CASOS DE MAL DEL PINTO
POR ENTIDADES FEDERATIVAS
REPUBLICA MEXICANA
1960 - 1983

ANNEX 4

AÑO	E N T I D A D E S (')										T O T A L
	GUERRERO	MICHOACAN	MEXICO	CHIAPAS	PUEBLA	OAXACA	MORELOS	VERACRUZ	TABASCO		
1960	23 922	2 475								26 467	
1961	40 008	12 086								52 094	
1962	23 499	4 716	4 698	4 477	2 972	2 106	2 423			32 913	
1963	19 672	3 236	7 216	4 920	2 846	1 652	2 627			42 704	
1964	19 541	1 401	4 599	2 350	2 706	1 204	2 505			37 686	
1965	11 991	2 303	3 997	2 823	2 549	1 351	2 042			27 051	
1966	9 583	3 957	2 590	3 342	699	2 861	318			24 895	
1967	4 759	1 732	802	893		928	32			14 513	
1968	1 284	964	143	677		993	18			4 244	
1969	1 750	116	148	383	3	57	5	243		2 945	
1970	271	127	73	176		48		89	132	1 140	
1971	176	52	42	77		48		6	3	503	
1972	166	49	23	56		44		14		377	
1973	183	29	21	64		23		13	11	357	
1974	130	14	11	16		16		6	2	248	
1975	65	4	1	37		2		6		112	
1976	47	8	2	11		11		3		99	
1977	51	6		6		3		2		81	
1978	13	10	2			3		3		37	
1979	11			5		3				22	
1980	22			7		12				41	
1981	33			2		28				63	
1982	31	2	2	3		6		1		45	
1983	17			1				3		21	
TOTAL	156 395	33 892	24 372	20 326	11 775	11 398	9 970	392	148	268 666	

(') El orden de anotación depende del año en que se inician actividades de pesquisa activa

FUENTE: Registros del Programa de Control del Mal del Pinto

CASOS DE MAL DEL PINTO POR FORMA CLINICA
REPUBLICA MEXICANA
1980-1984

AÑO	FORMA CLINICA					TOTAL
	FIORE	AZUL	MIXTO	BLANCO		
1980	0	15	26	0		41
1981	4	25	34	0		63
1982	2	17	26	0		45
1983	1	9	11	0		21
1984	1	9	12	0		22

FUENTE: PROGRAMA DE CONTROL DE MAL DEL PINTO.