

The Incidence of Filariasis at the Insular Penitentiary for Men¹

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THE INSULAR PENITENTIARY for Men is located outside the town of Río Piedras. Its inmates come from all parts of Puerto Rico and obviously belong, in their majority, to the lower classes. Usually, there are from 1,300 to 1,500 sleeping in separate rooms or wards without screening or mosquito nets. It was decided that an examination of the blood of 1,256 prisoners was performed to determine the presence of microfilariae of *Wuchereria bancrofti*.

Each night at about 11, blood was obtained from the fingertips of a group of 25 men. The first 400 examinations were made utilizing large drops of blood spread circularly at each end of a glass slide. From the remaining 856 men, 20 cmm. of blood were drawn with a glass pipette, placed at each end of a glass slide, and then spread circularly so as to occupy a space, roughly, of about the size of a one-cent piece. The blood smears were left overnight and stained with Giemsa the next day; microscopical examination was made with the low power objective.

Out of the 1,256 prisoners examined, 57 were found infected with microfilariae (*W. bancrofti*), an incidence of 4.53 percent. Next, in order to determine evidences of filariasis, such as elephantiasis of the extremities or scrotum, enlarged lymph nodes, varicose lymph glands, subcutaneous nodules, hydrocele, nodules in epididymis or vas deferens, in the 57 positive cases, 40 of them were subjected to physical examinations. Eighteen were classified as normal, and the remaining revealed the following findings: in 11, the inguinal and femoral lymph nodes were slightly to moderately enlarged; in 7, the lymphatic group. One case had bilateral hydrocele of the tunica vaginalis, 1 elephantiasis of the scrotum, 1 moderate thickening of the vas deferens, and another atrophy of the testicles. However, enlargement of the inguinal and femoral lymph nodes has been encountered so frequently in our experience that very little importance can be ascribed to this finding. A history of lymphangitis was obtained from only one person—the prisoner with elephantiasis of the

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scrotum. In addition, most of the inmates had been affected at one time or another with scabies, the lesions of which had become secondarily infected.

Out of the 1,199 inmates negative for microfilariae, 1,147 were also given physical examinations. The number of them with some atrophy of the testicles was striking. A history of lymphangitis was obtained in 8. The complete findings are shown in the following list.

Hydrocele	63
Atrophy of testicles	65
Varicocele	8
Enlarged axillary lymph glands	238
Enlarged inguinal and femoral lymph glands	235
Enlarged epithrochlear lymph glands	13
Thickened spermatic cord	25
Enlarged or thickened epididymis	6
Elephantiasis of scrotum	6
Attacks of lymphangitis	8
Normal	555

Multiple findings were encountered in some of the patients, hence the total will not correspond to the number of inmates examined.

Table 1 shows the results of various filariasis surveys conducted in Puerto Rico. Hoffman *et al* included the whole Island in their survey; Ashford, Ashford and Snyder, and Oliver and Oliver González carried on theirs among troops stationed in Puerto Rico.

TABLE 1
Results of Filariasis Surveys Conducted in Puerto Rico

<i>Author</i>	<i>No. of Persons Examined</i>	<i>Percentage of Positive Cases</i>
Hoffman, Marín and Burke ^a	4,950	5.5
Ashford ^b	250	12.0
Ashford and Snyder ^c	480	3.7
Oliver and Oliver González ^d	794	1.9
Tampi ^e	518	7.7
Hernández Morales and González Barrientos	1,256	4.53

^aW. A. Hoffman, R. A. Marín, and A. M. B. Burke, Puerto Rico J. Pub. Health & Trop. Med., 7:321-359, 1932.

^bB. K. Ashford, Med. Rec., 64:724-728, 1903.

^cB. K. Ashford and H. McC. Snyder, Puerto Rico J. Pub. Health & Trop. Med., 8:375-385, 1933.

^dA. G. Oliver and J. Oliver González, Puerto Rico J. Pub. Health & Trop. Med., 14:18-21, 1938.

^eM. K. Tampi, Puerto Rico J. Pub. Health & Trop. Med., 6:435-442, 1931.

Table 2 shows the various towns in Puerto Rico from whence the positive cases of the present study came.

TABLE 2
Towns in Puerto Rico from Whence Positive Cases Came

<i>Towns</i>	<i>No. of Cases</i>	<i>Towns</i>	<i>No. of Cases</i>
Aguas Buenas	1	Gurabo	3
Albonito	1	Juncos	2
Arecibo	1	Lares	1
Barceloneta	1	Manatí	2
Barranquitas	1	Maricao	1
Bayamón	1	Mayagüez	3
Caguas	4	Naguabo	1
Canóvanas	1	Ponce	3
Carolina	1	Puerta de Tierra	1
Cataño	1	Rio Piedras	1
Cayey	5	San Juan	2
Ceiba	1	San Lorenzo	1
Cidra	1	San Sebastián	1
Fajardo	1	Santurce	7
Guayama	1	Villalba	1
Not known		5	

SUMMARY

In a filariasis survey, conducted at the Insular Penitentiary for Men, night blood was obtained from 1,256 inmates and subsequently examined. Microfilariae were found in 57, or 4.35 percent, of them.

Of the 57 positive cases, 40 were submitted to a physical examination in order to determine what evidences of filariasis there might be among them. Elephantiasis of the scrotum was observed in 1 and moderate thickening of the spermatic cord in another; whether or not this was of filarial origin is not conclusive. However, evidence of hydrocele was conspicuous in this group and in the 1,199 inmates negative for microfilariae. Only 9 histories of lymphangitis were obtained for the total group, however.

If elephantiasis of the scrotum, thickening of the spermatic cord, recurrent attacks of lymphangitis, and hydrocele are considered evidence of filariasis, then the total incidence of the disease among the 1,256 prisoners examined was 13.6 percent.