NOTES, CASES AND INSTRUMENTS

REPORT ON ONCHOCERCOSIS.

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The ocular conditions associated with the so called coast erysipelas, which have been described by Pacheco Luna (Amer. Jour. Ophth., v. 1, p. 122), make the identification of the etiologic parasite a matter of interest to ophthalmologists.

During the month of July, 1917, I received from Dr. Pacheco Luna five tumors extirpated from two individuals attacked by so called coast erysipelas and named by him onchocercosis. These tumors had a form similar to that of the seed of a bean (*Vicia faba*, L.), and of equal size or somewhat larger than the same.

Dissecting the outer coat of Tumor A, I found that in the exterior existed a sclerosed tissue, extremely hard; and some nodules of the size and form of a pea which on being cut by a bistoury showed small threadlike fragments of ivory color that were very brittle.

In accord with Dr. Pacheco Luna, and following the method proposed by Brumpt (Precis de Parasitologie, 1913), I submitted the other four tumors to the action of artificial gastric juice, which transformed almost all the tissues of the tumors into a gelatinous matter, and I obtained the following results:

Tumor B. Pieces of the female which united measured about 40 cm. There were neither male nor embryos.

Tumor C. Fragments of the female with both extremities. The extremity of another female. Total of the fractions found, females 60 cm. Two males. Embryos very numerous.

Tumor D. Formed by several nodules. Nodule (a). Female, both ends and pieces of the body. One male of 24 mm. Embryos very numerous. Nodule (b). Extremity of female. One male of 35 mm. Embryos very numerous. Nodule (c). Fragments of the female without extremities. One male. Embryos very numerous. Nodule (d). Female extremities and body. Neither male nor embryos.

Tumor E. Female which with difficulty and patience I obtained entire. Length 32 cm. Neither male nor embryo.

OBSERVATIONS.

The female reaches more than 40 cm. in length by 300 μ , or somewhat larger—largest diameter. The striae are transverse, well marked. Submitting to hot water, the tumor C. previously treated by the artificial gastric juice, the skin remained separated like a sheath.

The male. The length up to 42 mm. Thickness (largest diameter) about 200 μ . Two spiculae which protrude almost from the same point, one from one of 180 μ , the other of 80 μ . The papillae difficult to be seen, the three anal orifices were identified. The tail is always curled up. In one of the tumors, which I examined after those already mentioned, and which also were sent to me, I found seven males and one female. In all I have examined thirteen males.

Embryos, length 250 μ , thickness largest diameter 10 μ , many even more. In the female with which there was no male, there were no embryos. I did not succeed in seeing any visible "spot."

Ova. I did not find any, but I had before me a preparation of Dr. Robles. They have the form of a lemon with a curled up embryo.

The work of microphotography I did, together with the medical student, V. M. Calderón. The preparations were, two from Dr. Robles, and the other my own.

The tumors have always been found under the hairy skin.

The infected zone of these filarias is in the Pacific region, Republic of Guatemala, between 1,000 and 2,000 feet above sea level.

The following comparative table clearly shows the characteristics of these filarias and their differences from other kinds.

COMPARATIVE TABLE.

FILARIA, BANCROFTI.	ONCHOCERA VOLVULUS.	SPECIMENS UNDER EXAMINATION
Cobbold 1877	Leuckart 1893	
Body white opal-like	Body white opal-like	Body white opal-like
Transparent	Sufficiently transparent	Little transparent (before preparing).
Integument smooth	Integument slightly striated transversely	Integument slightly striated transversely. In the preparations striae are more marked.
Body thin	Body thin	Body thin
Thinner at both ends, which are obtuse	Thinner at both ends, which are obtuse	Thinner at both ends, which are obtuse
Mouth unarmed, without papillae	Mouth unarmed, without papillae	Mouth unarmed, without papillae
Male: length 40 mm.	Male: length 30 mm.	Male: length 42 mm.
Width 100μ	Width 130μ	Width 200μ
Tail with tendency to curl in ring form	Tail curved and generally rolled up	Tail always rolled up ring-like
Papillae 3 pairs, post-anal, none preanal	Papillae 3 at each side of anus, and 3 tail ones	Papillae difficult to observe
Spiculae	Spiculae	2 curved unequal spiculae of 80μ and 180μ
2 thin unequal ones of 200μ and 600μ	2 curved of 82μ and 117μ	
Anal opening 130μ from the end	Anal opening 40μ from end	Anal opening 40μ ?
Female 8 to 10 cm. long	Female 40 cm. long. (Prout)	Female 42 cm. long or more
Width 240 to 300μ	Width 360μ	Width 300μ
Vulva 1 mm. to 1.30 mm. from the posterior end	Vulva 760μ	Vulva?
Anus 280μ from the posterior end	Anus?	Anus (Female)?
Ova 40 by 23μ	Ova large oval, with a prolongation, pointed at each pole.	Ova ovoid, lemon shaped with a prolongation on one of the poles.
Ovovivipara	Vivipara	Vivipara (Molina) Ovovivipara (Robles)

STEREOSCOPIC SILHOUETTES FOR TESTING ESTIMATION OF DISTANCES.

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These tests adapted, redrawn and translated by Dr. Würdemann were submitted for publication soon after the United States entered the war. It was deemed prudent to delay their publication at that time.

Some time ago there appeared by some foreign author whose name I do

not know and in what publication I am not cognizant, a description of a stereoscopic test for binocular vision and estimation of distances.

The plates were later republished and sold by Carl Zeiss of Jena. Photographic copies of these plates have recently been in use by the Examining Boards for Aviators of the Signal Corps of the United States Army. These were in the German language and as their use in this form for this particular purpose did not seem to me to be patriotic, therefore, I