

AN ABDOMINAL TUMOUR CAUSED BY  
*GNATHOSTOMA SPINIGERUM* (OWEN,  
1836)

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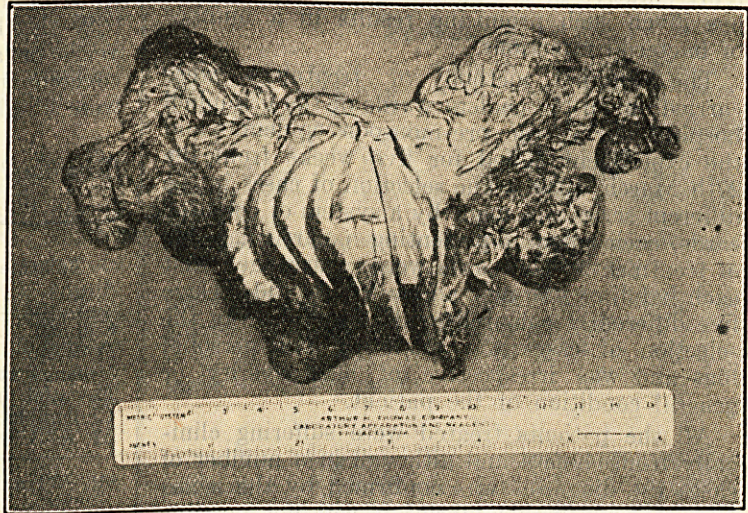
A TUMOUR and a small living round worm were removed by a surgeon from the abdominal cavity of a Siamese female, aged 27, with symptoms of intestinal obstruction and were sent to the Department of Pathology for diagnosis. The pathological examination of the tumour and morphology of the parasite are recorded as follows:—

**Macroscopic description.**—The specimen consisted of an irregular reddish-yellow firm tumour and a living round worm. The tumour measured  $7.0 \times 6.5 \times 3.0$  cm. and was situated in the great omentum below the greater curvature of the stomach. It was apparently covered with smooth dull-looking peritoneum and at one place was overlaid by a few dark-red blood clots. On serial section it was found to be composed of greyish moist firm shiny tissue marked with many small, scattered, yellow, opaque areas and it contained a long distorted channel with the diameter about the size of a pin's head. This channel was filled with brownish turbid exudates and opened to the external surface of the tumour. A few small old hæmorrhagic areas were also observed in the tissue near this channel.

**Microscopic examination of the tumour.**—The hæmatoxylin-eosin stained sections of the specimen were made up mainly of œdematous cellular-adipose fibrous tissue which was very extensively infiltrated with eosinophiles and some large and small mononuclear cells. In some sections there were a few small irregular spaces filled with degenerated and necrotic leucocytic exudates. The tissue about these spaces was necrotic and more heavily infiltrated with eosinophiles and polymorphonuclear leucocytes.

These channels looked like small abscesses. One edge of the section studied was covered with a thick layer of hæmorrhagic exudate.

**Description of the worm.**—After careful examination, the worm was identified as an immature female *Gnathostoma spinigerum* having the following structure:—It measures, after fixation, 10.80 mm. in length and 1.04 mm. in width. The anterior end is provided with a pair of trilobate lips and a cephalic bulb which measured 0.36 mm. long and 0.58 mm. wide and is furnished with eight rows of single-pointed spines pointing posteriorly. The eighth row is still in a rudimentary stage. The body is separated from the cephalic bulb by a definite constriction and is transversely striated. The anterior two-thirds of the body are covered with tridentate and simple spines and the remaining posterior third shows none of them. The posterior end of the worm is more or less pointed. The alimentary system consists of a muscular œsophagus which measured 2.6 mm. in length, and an intestine. The latter contains a great amount of dark-red blood and opens into the subterminal anus. The vulva opens on one side of the body at the anterior part of the posterior



half of the worm. A great number of presumably young unfertilized ova are also observed in the bipartite uterus which is coiled up and down inside the body.

Unquestionably, the tumour thus described was formed as the result of the infestation by this worm. It is also interesting to note that to the best of my knowledge this is the first human case of an intraperitoneal tumour caused by *Gnathostoma spinigerum* reported in the literature.

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