Revista Argentina de Microbiología 53 (2021) 272–273

asociación argentina de microbiología

REVISTA ARGENTINA DE MICROBIOLOGÍA

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MICROBIOLOGICAL IMAGE

Zoonotic parasite *Spirometra erinaceieuropaei* in a domestic cat from Buenos Aires city, Argentina

El parásito zoonótico *Spirometra erinaceieuropaei* en un gato doméstico de la ciudad de Buenos Aires, Argentina

Pérez Matías Gastón[a,*], **Borras Pablo**[b]

[a] *Instituto de Investigaciones en Microbiología y Parasitología Médicas, Facultad de Medicina, Universidad de Buenos Aires (UBA)-Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET), Buenos Aires, Argentina*
[b] *Departamento de Enfermedades Infecciosas y Parasitarias de Animales de Compañía, Hospital Veterinario Panda, Buenos Aires, Argentina*

Available online 5 November 2020

The patient was a 1-year-old neutered male European shorthair cat that lived in Buenos Aires city (San Telmo, 34°37′14″S 58°22′18″O). The clinical signs were: lethargy, anorexia, diarrhea, sporadic vomiting and abdominal pain.

The parasite sample was identified as a cestode (Fig. 1A). We dissected the uterus of the gravid proglottids and obtained light brown eggs, with pointed ends and evident operculum (Fig. 1B). The average egg measures were 66.37 μm by 35.75 μm (n = 65) (Fig. 1B). The main characteristics (based on mature and gravid proglottids) were (i) presence of anterior and posterior uterine coils in the longitudinal median line of the proglottids; (ii) ventral middle uterine pore in the third of the gravid proglottid (Fig. 1C); (iii) uterus opened by a pore well separated from and posterior to the vagina, and presence of a varying number of loops in the terminal heavy walled portion in an ''S'' shape (Fig. 1C); (iv) uterine pores were on the midline behind the anterior margin of the terminal ball, 75–105 μm (Fig. 1C); (v) uterus consisted of 5–7 loops and the dumbbell-shaped ovary was connected to the uterus and situated near the posterior margin; (vi) vagina passed traversing from its vestibule in an approximately straight path in the median line thrown into lateral undulations of different amplitude; (vii) vesicular testes are numerous and placed in two ventral–dorsal layers; (viii) cirrus surrounded by the seminal receptacle and opens out separately from the vagina and near to the uterine pore (Fig. 1D).

At present, there is still discrepancy among researchers about the denomination of species in the genus *Spirometra*; however, in general it is accepted that there are two important species that commonly infect domestic cats: *S. erinaceieuropei* and *Spirometra mansonoides*[3,4]. The basic differences between the two species are: the vagina which is located medially and descends in a straight line in *S. mansonoides*, whereas the vagina in *S. erinaceieuropei* lies beside the midline and descends in waves of different amplitude[2,3]. The other difference between the two species is the shape of the uterus, which is simple, uniform and always presents two turns anteriorly in a C-shape in the case of *S. mansonoides*, as opposed to the uterus of *S. erinaceieuropei* which lacks uniformity in the number of turns (between three and seven loops), in addition to having an irregular arrangement and size[1]. Based on the morphological examination, the tapeworm found in the domestic cat was identified as *S. erinaceieuropei*. This is the first time that

* Corresponding author.
E-mail address: perezmatiasgaston86@gmail.com (P. Matías Gastón).

https://doi.org/10.1016/j.ram.2020.08.001

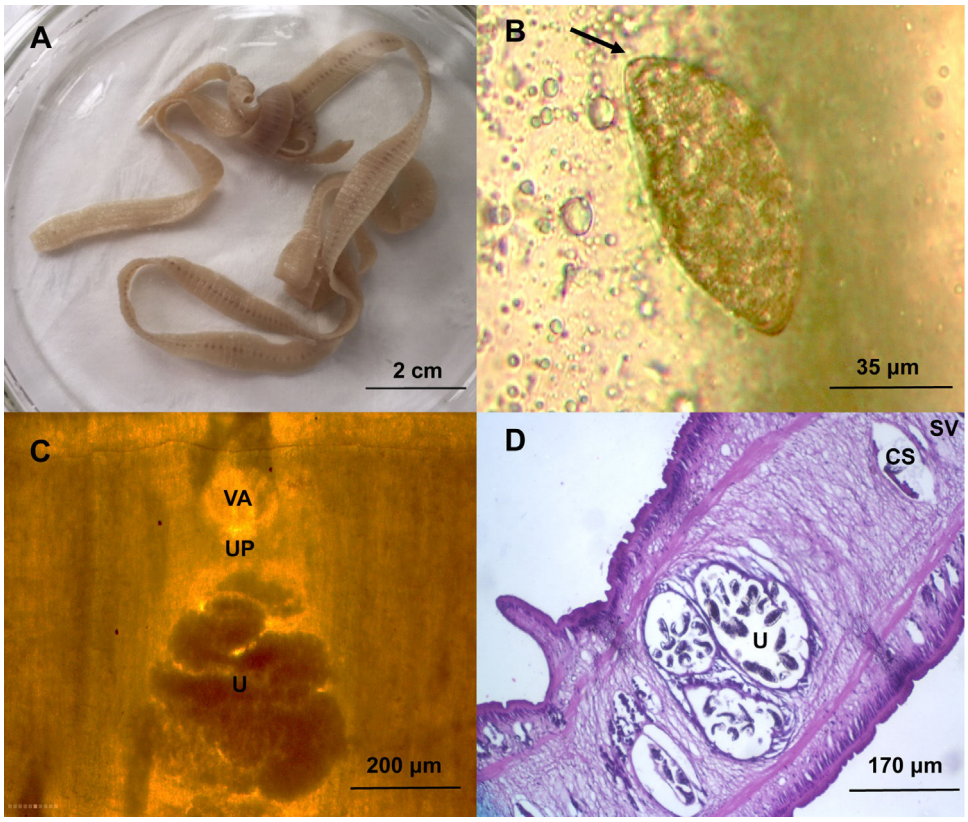

Figure 1 Morphological examination of the adult parasite recovered from the domestic cat's vomit. (A) Adult parasite of *Spirometra erinaceieuropaei*. (B) Egg of *Spirometra erinaceieuropaei*. The arrow indicates the operculum of the egg. (C) Mature mounted proglottid showing the uterus (U), uterine pore (UP) and vagina (VA) (40×). (D) Longitudinal section of a gravid proglottid showing the cirrus sac (CS), seminal vesicle (SV) and uterus (U) (hematoxylin–eosin stain). Scale bars are indicated in the corresponding panels.

the presence of the zoonotic parasite *S. erinaceieuropaei* is identified in a domestic cat with clinical signs in Buenos Aires city, Argentina.

Conflict of interest

The authors declare that they have no conflicts of interest.

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