



LETTER TO THE EDITOR

***Sporothrix brasiliensis*: A growing hazard in the Northern area of Buenos Aires Province?**

***Sporothrix brasiliensis*: ¿una amenaza creciente en la región norte de la provincia de Buenos Aires?**

Dear Editor,

The aim of this letter was to provide some perspective to all microbiologists, veterinarians and medical doctors with regard to four human and three feline cases of sporotrichosis that occurred during November 2018 and May 2019 in three rural areas of the Northern area of the province of Buenos Aires, Argentina. Since 2006, few cases of feline sporotrichosis have occurred sporadically in the same geographical areas of our country^{1,5}. However, it is striking that within a six-month term seven cases have occurred, two of them as small outbreaks with zoonotic transmission to humans.

The first small outbreak occurred in Los Polvorines, and affected both the veterinarian (female, 30 years old), who was scratched by a sick cat (a 2-year-old spayed female mongrel free-roaming domestic cat) and the cat's infant owner (female, 3 years old), who had been in contact with it. The veterinarian developed the lymphocutaneous form of the disease whereas the young girl the fixed form. The second outbreak occurred in Tigre, and affected the veterinarian (female, 37 years old) and the cat's owner (female, 35 years old), both of whom had been scratched by the sick cat (a 2-year-old intact male mongrel free-roaming domestic cat). The last case only involved a 4-year-old neutered male mongrel free-roaming cat from Partido 3 de Febrero, presenting multifocal crusted and ulcerated cutaneous lesions.

In all cases, the diagnosis was performed at *Cátedra de Enfermedades Infecciosas, Facultad de Ciencias Veterinarias, Universidad de Buenos Aires*. In brief, samples of the cutaneous exudates were collected through sterile swabs from the ulcerative lesions of all human patients and cats. Nail tip fragments from both thoracic limbs were also obtained from one cat. Direct examination of tissue samples from the four patients and feline lesions revealed the presence of *Sporothrix* yeast-like organisms. Fungal cultures and molecular identification of the strains were performed³. In all cases, fungal isolates were identified as

Sporothrix brasiliensis, the most virulent species within the genus *Sporothrix*. Oral itraconazole or a saturated solution of potassium iodide for at least three months were the treatments of choice for these cases.

Our aim was to shed some more light on the implications associated with this emerging hazard. In Brazil, a neighboring country of Argentina, the number of reported cases of zoonotic infections from feline-related sporotrichosis due to *S. brasiliensis* has reached alarming proportions^{4,6,7}.

Bearing in mind the epidemic magnitude of this mycosis in Brazil, it is mandatory to control this fungal disease through basic educational, sanitary and political measures. Since Argentina is a vast country, and many geographical areas have favorable conditions for *Sporothrix* growth, the prevalence of cases must be much higher than that estimated in the literature. However, the fact that sporotrichosis is not a reportable disease makes it very difficult to determine the real scale of zoonotic sporotrichosis. An awareness of the zoonotic and epizootic potential transmission of sporotrichosis should be raised among veterinarians and animal care and service workers. Therefore, epidemiological research works from different parts of Argentina are really essential for gaining insight into the prevalence of these emerging fungi. Once available, such information will be extremely valuable both for designing new assays for its rapid detection as well as for implementing proper treatments. Bearing in mind the "one health" concept, the experience described in the present letter highlights the need for future strategies for sporotrichosis surveillance, control and prevention.

Finally, at the moment of writing this manuscript, an outbreak of sporotrichosis with probable zoonotic transmission to humans was reported in El Calafate, Province of Santa Cruz, Argentina². To the best of our knowledge, this outbreak represents the southernmost outbreak location of sporotrichosis.

Sincerely,

Conflict of interest

None.

References

- Bertera A, Rossi MV, García S, Tesadro G, Aloise I. Esporotrichosis linfocutánea secundaria a una mordedura de gato. *Dermatol Argent*. 2017;23:3.

<https://doi.org/10.1016/j.ram.2020.02.002>

0325-7541/© 2020 Asociación Argentina de Microbiología. Published by Elsevier España, S.L.U. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

2. Departamento de Epidemiología y Estadística Hospital SAMIC El Calafate. Alerta Epidemiológica; 2019 [on-line]. http://aam.org.ar/src/img_up/18122019.0.pdf
3. Etchecopaz AN, Lanza N, Toscanini MA, Devoto TB, Pola SJ, Daneri GL, Iovannitti CA, Cuestas ML. Sporotrichosis caused by *Sporothrix brasiliensis* in Argentina: case report, molecular identification and *in vitro* susceptibility pattern to antifungal drugs. *J Mycol Med.* 2019;15:100908.
4. Gremião ID, Miranda LH, Reis EG, Rodrigues AM, Pereira SA. Zoonotic epidemic of sporotrichosis: cat to human transmission. *PLoS Pathog.* 2017;13:e1006077.
5. Iachini R. Sporotrichosis in a domestic cat. *Rev Argent Microbiol.* 2009;41:27.
6. Pereira SA, Gremião ID, Kitada AA, Boechat JS, Viana PG, Schubach TM. The epidemiological scenario of feline sporotrichosis in Rio de Janeiro, State of Rio de Janeiro, Brazil. *Rev Soc Bras Med Trop.* 2014;47:392–3.
7. Poester VR, Mattei AS, Madrid IM, Pereira JTB, Klafke GB, Sanhotene KO, Brandolt TM, Xavier MO. Sporotrichosis in Southern Brazil, towards an epidemic? *Zoonoses Public Health.* 2018;65:815–21.

Alejandro Etchecopaz^a, Miguel Scarpa^b, Javier Mas^c, María L. Cuestas^{d,*}

^a *Universidad de Buenos Aires, Facultad de Ciencias Veterinarias, Cátedra de Enfermedades Infecciosas, Argentina*

^b *Universidad de Buenos Aires, Facultad de Ciencias Veterinarias, Servicio de dermatología del Hospital Escuela de Pequeños Animales, Argentina*

^c *Universidad de Buenos Aires, Facultad de Ciencias Veterinarias, Cátedra de Microbiología, Argentina*

^d *Instituto de Investigaciones en Microbiología y Parasitología Médica (IMPAM, UBA-CONICET), Buenos Aires, Argentina*

*Corresponding author.

E-mail address: marilucuestas@gmail.com (M.L. Cuestas).