Objective: This study aims to report the evolution of cat-transmitted sporotrichosis (CTS) and map the distribution of these cases within a tertiary hospital in Curitiba (state capital of Paraná, in southern Brazil).

Methods: We reviewed the medical records of 175 patients seen in a hospital service over a period of 10 years (2011-21). Proven CTS consists of patients that had clinical manifestations after contact with sick cats, microbiological, and/or histopathological evidence of sporotrichosis. CTS was considered probable when patients had clinical signs associated with contact with sick cats that had a microbiological diagnosis of sporotrichosis made by a veterinarian. The confirmed cases in culture were submitted to molecular identification performed by sequencing the locus of calcofluor (CAL), determined by the set of primers 1 (5′-GAG TWC AAG GAG GCC TTC TC-3′) and C1-2A (5′-TTT TGT CAT CAT GAA GGG TGC-3′). The study was approved by the local Research Ethics Committee. Data analysis was performed using Statistical software for Windows (Version 6.0, Statsoft Inc., Tulsa, OK, USA).

Results: The diagnosis of proven sporotrichosis was established in 57 patients (32.4%) and the probable diagnosis was verified in 118 patients (67.4%). Among all 175 patients, 57 (32.4%) cases were reported as zoonotic transmission and only 4 (1.7%) as saprozoic (clinical mycetoma). Molecular identification was performed in 35 isolates and in 97.1% (n = 34) of them, Sporothrix brasiliensis was the main etiological agent identified (Fig. 1). Most cases of sporotrichosis were diagnosed between 2019 to 2021 (n = 155, 40%). The incidence rate increased from 0.2 cases/100,000 patients in 2011 to 0.6 cases/100,000 patients in 2021 (until July) and was observed geographic expansion of human cases of CTS in Curitiba in the last decade (accumulated cases 2011-12, 2011-16, and 2011-21 July) (Fig. 2). Prevalence rate was 4.97 cases per 100,000 patients. The majority of the patients were from Curitiba (n = 145, 82.9%). Woman were the most affected (63.4% woman vs 36.6% men) with the average age of 40 years old (3-87 years old). A total of 12% (n = 21) of the patients were under 18 years old. The prevalence of CTS in patients at high risk of occupational exposure to the disease was 9.7% (n = 17), 9 being veterinarians, 5 veterinary students, 3 pet house workers, and 2 gardeners. The main clinical manifestation was lymphocutaneous (n = 114, 67.1%), followed by nodular cutaneous (n = 43, 24.6%), ulcer (n = 13, 7.4%), and mixed forms (n = 5, 2.9%).

Conclusions: CTS is a public health issue that is aggravated due to the lack of national control programs, unknown prevalence of the disease, lack of knowledge of the population, and health professionals about the epidemic. Besides that, there are difficulties in handling sick cats, lack of diagnosis of human and veterinary cases, and poor access to free medication. In 2021, the first case of CTS was identified in Curitiba, Paraná, Brazil. In 2010, there has been a significant increase in the number of new cases. These evidence indicate the continuous dispersion of the disease out of epidemiological control.

Poster Presentations
Figure 1. Phylogenetic tree of the *Sporothrix* isolated in the proven cases. Based on calmodulin near-complete, genes constructed with maximum likelihood implemented in MEGA 7.0.26. Bootstrap values >80 from 1000 resampled data sets are shown. *Sporothrix brunneviolacea* (CBS 793.73) was taken as outgroup. Pathogenic species are highlighted in color: yellow *Sporothrix brasiliensis*, red *Sporotrich scenckii* strictu sensu, green *Sporothrix globosa*, blue *Sporothrix luriei* and gray *Sporothrix pallida* complex. The fungi isolated from the study are in bold.
**Poster Presentations**

**P139**

**Candida: An important partner in polymicrobial colonization on indwelling medical devices**

Purna Joshi, Pooja Damu, Devanshi Gajjar
The Mahatma Sayajirao University of Baroda, Vadodara, India

Poster session 2, September 22, 2022, 12:30 PM - 1:30 PM

Indwelling medical devices are of routine use in hospitals for patient care but they lead to the colonization of microbes on their surface making the patient vulnerable to device-related infections (DRIs). Biofilms formed due to the growth of microbes are the most common cause of device-related infections.

Objectives: To isolate, identify and study the microbial colonization of indwelling medical devices (urinary catheters and central venous catheters).

To quantify the biofilm formed by the isolates.

Method: In the present study, microflora was isolated from urinary catheters (n = 28) and central venous catheters (n = 25) that were catheterized in 85 patients. Quantification of biofilm was done by Crystal violet assay.

Results: Among 28 urinary catheters, 14 catheters had polymicrobial colonization (n = 10 mixed bacterial and fungal colonization, n = 3 poly-bacterial, and n = 1 poly-fungal), 10 catheters were observed to have mono-species colonization (n = 6 fungal, n = 4 bacterial), while 4 catheters did not show any colonization. Whereas among 25 central venous catheters, only 3 catheters showed mono-bacterial colonization and 2 catheters showed mono-fungal growth and 20 catheters did not show any colonization. A total of 46 isolates were obtained from all urinary and central venous catheters, out of which Candida spp. was found to be highest in number with n = 13 and 30% of total isolates obtained (Fig. 1 shows the distribution of microbes obtained). The interesting observation in the study is that Candida spp. is found to have multi-species colonization with bacterial isolates (Pseudomonas aeruginosa, Klebsiella pneumoniae, Serratia marcescens, Enterobacter cloacae, and Enterococcus faecium) as well as fungal isolates (Trichosporon spp). Quantification of biofilm formed by these isolates was carried out by crystal violet assay and it was observed that 35.6% isolates formed strong biofilm of which Candida spp. was a major contributor. It was also observed that Candida spp. was always the stronger biofilm forming partner in mixed species biofilms.

Conclusion: It was concluded that majority of colonization on indwelling medical devices are polymicrobial and Candida spp. appears as an important partner in polymicrobial colonization. Among all obtained isolates maximum were strong biofilm forming of which Candida spp. were the major contributors.