

# Temporal Trends in Adult and Pediatric Patients with Fungal Isolation in Peritoneal Fluids: Single-Centre 24-Year Experience.

P0370



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## INTRODUCTION AND AIM

- ❖ Fungal intra-abdominal infections have been recognized with increasing frequency in recent years. However, clinical experience is still limited to case reports or uncontrolled case series.
- ❖ *Candida albicans* is the most common yeast causing peritonitis, but the number of studies assessing the susceptibility of peritoneal yeast isolates is scarce
- ❖ To know about the epidemiology of the yeast species isolated from peritoneal fluid could be predictive of likely susceptibility and might be used as a guide for empiric therapy.
- ❖ **The aim of this study was to analyze the incidence, etiology and antifungal susceptibility profile of yeast species isolated in peritoneal fluids from adult and pediatric patients in a single institution in Madrid over 24 years.**

## METHODS

- ❖ Clinical reports of patients with fungal isolation in peritoneal fluids attended at our institution between 1989 and 2012 were included in this study.
- ❖ Cases of monofungal or polyfungal infections were considered when isolating single or multiple yeast species from peritoneal fluid samples.
- ❖ Species distribution and antifungal susceptibility testing were analyzed separately in adults and pediatric patients.
- ❖ In vitro activities of amphotericin B (AMB), fluconazole (FZ), itraconazole (IZ), voriconazole (VZ), caspofungin (CAS), anidulafungin (AND) and micafungin (MYC) were determined by the broth microdilution method according to CLSI guidelines.

- ❖ During the study period, the incidence of yeast isolated from peritoneal fluids increased significantly ( $p < 0.05$ ) from 1989 (0.188/1,000 admissions) to 2012 (0.588/1,000 admissions).

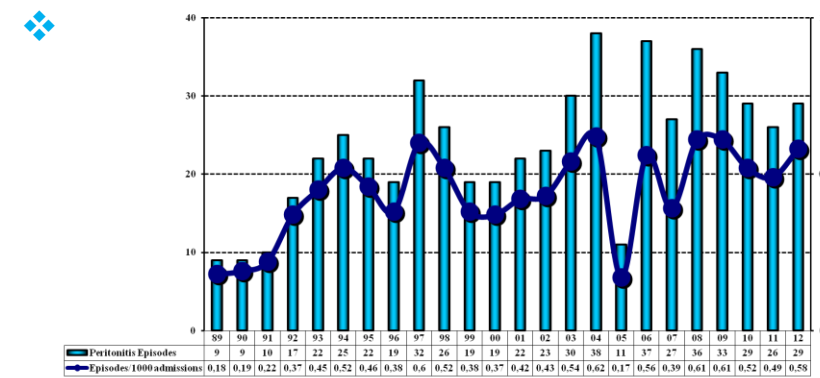


Fig. 1.- Incidence of Yeasts isolated from peritoneal Fluids per 1,000 admissions

- ❖ A total of 570 cases were analyzed: 534 in adults (93.7%) and 36 in pediatric patients (6.3%).

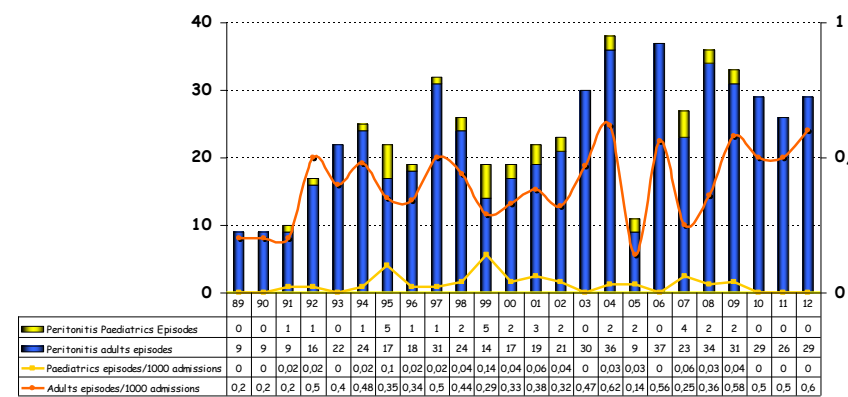


Fig. 2.- Temporal Trends in Adult and Pediatric Patients with Fungal Isolation in Peritoneal Fluids

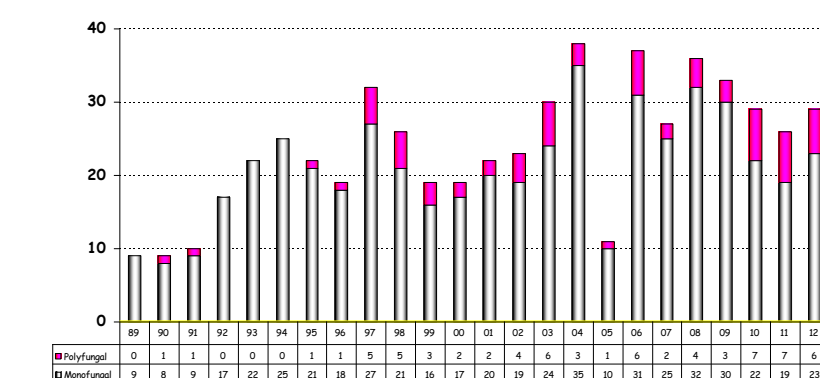


Fig. 3.- Temporal Trends in Monofungal and Polyfungal Episodes with Fungal Isolation in Peritoneal Fluids

## RESULTS

- ❖ In adult patients, episodes were monofungal in 86.9% and polyfungal in 13.1% of them. *C. albicans* and *C. glabrata* were the most frequent species in monofungal infections (61.0% and 14.0%, respectively); the prevalence of episodes due to *C. tropicalis* and *C. parapsilosis* was similar (8.0% and 7.0%, respectively). The most frequently fungal combinations involved in polyfungal peritonitis in adults were *C. albicans* + *C. glabrata* (34.3% of cases) and *C. albicans* + *C. tropicalis* (20%). Resistance to antifungals among isolates from adult patients was as follows: AMB (1.4%), FZ (13.8%), IZ (6.4%), VZ (0.9%), CAS (4.8%), AND (2.5%) and MYC (2.5%).

%Resistance	AMB	FZ	IZ	VZ	CAS	AND	MYC
<b>Adult</b>	1.4	13.8	6.4	0.9	4.8	2.5	2.5
<b>Pediatric</b>	0	0	0	0	0	0	0

Table 1.- % Resistance of Yeasts isolated from Peritoneal Fluids in Adult and Pediatric Patients

- ❖ In pediatric patients, monofungal infections accounted for 83.3% of the cases and, polyfungal infections for 16.7%. *Candida albicans* (50.0%) and *C. parapsilosis* (39.0%) were the most frequently species recovered from monofungal cases. The most frequently fungal combinations involved in polyfungal infections in pediatric patients were *C. albicans* + *C. parapsilosis* (33.3% of cases) and *C. albicans* + *C. tropicalis* (33.3%). No resistance to antifungal agents was detected among isolates from pediatric patients.

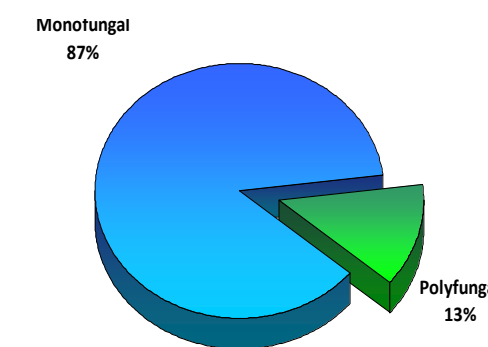


Fig. 4.- Monofungal and Polyfungal Episodes in Adult Patients

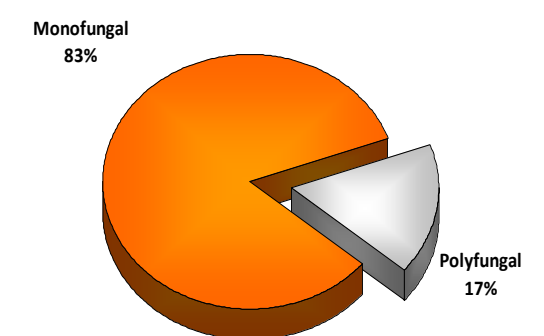


Fig. 5.- Monofungal and Polyfungal Episodes in Pediatric Patients

## CONCLUSIONS

- The number of both, adults and pediatric patients, with fungal isolation in peritoneal fluids increased significantly during the study period.
- Our study shows different trends in epidemiology and antifungal susceptibility of yeast species isolated from pediatric and adult patients.
- Resistance to antifungal agents tested was significantly higher in adult patients. The detection of polyfungal infection in both adults and pediatric patients could be important for the treatment and management of these patients.