

INFLUENCE OF FLUCONAZOLE USE ON THE PREVALENCE OF CANDIDA ISOLATES FROM HOSPITALIZED PATIENTS

*Gunderson SM, Ristow KL, Schreckenberger PC, Danziger LH University of Illinois at Chicago, Chicago, Illinois, USA

Background: The epidemiology of systemic Candida (C.) infections is changing with an emergence of non-albicans isolates. Some researchers have attributed this trend to the increased use of fluconazole; however, this remains controversial in the current literature. Hence, we evaluated the influence of fluconazole use on the prevalence of C. species found in the blood, urine, and respiratory tract from an inner city teaching hospital.

Methods: All blood, urine, and respiratory isolates from inpatients hospitalized at the University of Illinois at Chicago Hospital were identified from May 1994 through November 2001. Data collection included C. species identification, site of infection, hospital-wide fluconazole purchasing records, and inpatient-day census. Results: On a yearly average, 874 positive fungal isolates were found in the bloodstream (14%), respiratory tract (32%), and urine (53%). The frequency of C. species at each site over time is as follows:

BLOOD YEAR	URINE			RESPIRATORY			FLUCONAZOLE			
	C.a	C.g	Non-a	C.a	C.g	Non-a	C.a	C.g	Non-a	\$/inpatient-day
1994	84%	5%	11%	51%	30%	18%	75%	5%	20%	0.34
1995	52%	8%	40%	54%	32%	14%	86%	3%	11%	0.37
1996	47%	29%	25%	7%	38%	15%	78%	3%	19%	0.35
1997	44%	25%	31%	55%	25%	20%	77%	1%	22%	0.55
1998	56%	16%	28%	54%	28%	18%	81%	2%	17%	1.02
1999	23%	19%	58%	50%	35%	15%	72%	6%	22%	0.93
2000	17%	42%	40%	53%	27%	20%	74%	7%	19%	1.14
2001	33%	31%	36%	50%	30%	20%	89%	2%	10%	NA

The prevalence of C. species at each site changed over time and independently from other body sites. The prevalence of C. albicans in the blood may be decreasing over time but the prevalence of C. albicans at urinary and respiratory sites appear stable. The total dollars spent on fluconazole each year increased from 0.3 dollars per inpatient-day in 1994 to 1.14 dollars per inpatient-day in 2000. Conclusion: Despite the increase in fluconazole use, no consistent trend in the emergence of non-albicans and C. glabrata isolates was noted at all sites over the 8-year period. Therefore, the increased fluconazole use in our institution may not have impacted our overall fungal epidemiology.