

# Candiduria: A Biological Sign not to be neglected on a Field of Debility

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## Abstract

The urine is frequently among the sites colonized hospital and Candiduria still poses problems of interpretation. Indeed, the discovery of yeast in the urine can be the witness of contamination, a simple colonization or the first sign of invasive infection. We report the case of an elderly patient de66ans hospitalized in urology for management of bladder cancer who underwent radical cystoprostatectomy more bilateral lymphadenectomy and entérocystoplastie. Le patient was taken to dropping a point of ileo-ileal anastomosis responsible liquidiennes food and leaks then the patient was transferred to intensive care. During his stay he presented a febrile syndrome, ECBU objectified candiduria *Candida albicans*. The evolution was marked by the installation of a septic shock, blood culture came back positive for *Candida albicans*. Fluconazole has been started but the patient is décédé48h after. Candiduria may be a marker of dissemination in patients at risk with a high severity score. She was also associated with candidemia in 1.3 to 10% depending on the study. In subjects in ICU Candiduria could predict *Candida* invasion and should justify antifungal treatment and a close monitoring for mycological diagnosis precocity and better therapeutic management.

**Keywords:** Candiduria, invasive candidiasis, *Candida albicans*.

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## INTRODUCTION

Candiduria or the presence of *Candida* in urine is a common biological sign in hospitals. Often it is a simple colonization, but sometimes it can represent the first sign of a disseminated infection and the positivity of blood cultures later, thus posing problems of interpretation. In practice, this phenomenon remains unclear. The coordination between clinician and biologist should help identify patients requiring treatment.

## OBSERVATION

We report the case of a 66-year-old patient hospitalized in urology at the Military Hospital Moulay Ismail Meknes for taking charge of a bladder tumor having undergone transurethral resection of bladder. Anatomico-pathological examination was in favor of transitional bladder carcinoma of a high grade malignancy stage pT2 according to WHO 2004. The patient underwent radical cystoprostatectomy, bilateral nodal dissection and enterocystoplasty. The patient was resumed for ileo-ileal anastomotic laziness responsible for fluid and food leaks, During his hospitalization he presented a febrile syndrome at 39° C.

Urinalysis showed leucocyturia at 5.10 [4] WBC/ml with presence of yeasts on direct examination and *Candida albicans* positive culture.

The sample of pus from parietal wound revealed the presence of a mixed bacterial flora: *Proteus mirabilis*, *Staphylococcus non-aureus* and *Enterococcus faecium*. The patient was on amoxicillin / clavulanic acid, ciprofloxacin and gentamicin. Despite antibiotic therapy, the patient presented a septic shock, the blood culture was positive to *Candida albicans*. The evolution was fatal; the patient died 48 hours later despite the start of IV Fluconazole.

## DISCUSSION

The finding of Candiduria poses problems of interpretation and treatment decisions that result are not codified.

The prevalence of candiduria is estimated between 0.2 and 6% in asymptomatic volunteers and between 1 and 11% in hospitals [1]. Intensive care units represent a very high risk environment for the colonization of urine by yeast, with an incidence of 6.5 to 25% [2]. In addition to immunodepression

(transplantation, neutropenia), diabetes, advanced age, premature infants, existence of permanent urinary catheters and urinary tract maneuvers are risk factors for Candidal urinary tract infection.

The significance of candiduria, especially when associated with a critical threshold to distinguish colonization and infection is still controversial. According to some, the mere presence of yeasts in urinary cultures or direct examination defines candiduria. In other studies, quantification is a defining criterion: Candiduria greater than or equal to  $10^3$  UFC/ml is sufficient for some teams [3] and greater than or equal to  $10^4$  UFC/ml for others [1, 2]. See at least  $10^5$  UFC/ml with signs of urinary infection for other authors [4].

In most studies, *Candida albicans* is the most common species, followed by *Candida glabrata* [2, 3]. The combination of several *Candida* species in the same sample is not uncommon.

According to studies, candiduria may be a marker of dissemination in at-risk patients with a high severity score. It has been associated with candidemia in 1.3 to 10% according to the studies [5]. The diagnosis of invasive candidiasis is always difficult, given the lack of clinical specificity and the low sensitivity of blood cultures.

Mycologically, colonization by *Candida* yeasts proves to be an important risk factor for invasive candidiasis [6].

However, neonates, patients with urinary tract obstruction and immunocompromised patients are at increased risk of candidemia when candiduria [7].

In the intensive care unit, the search for candiduria is part of the determination of the Pittet score or colonization index, a high score would be associated with an increased risk of candidemia.

## CONCLUSION

In a hospitalized patient with significant candiduria, the search for other sites of colonization and blood culture should be systematic. Moreover, we must also look for possible correlations between the existence of candiduria and its importance, and the risk factors for systemic *Candida* infection.

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