LETTER TO THE EDITOR

Evaluation of tobacco agar for chlamydosporulation in Candida albicans and Candida dubliniensis

Évaluation d’un milieu au tabac pour la production de chlamydsopore par Candida albicans et Candida dubliniensis

Chlamydospore production by Candida albicans has been a key phenotypic criterion in its identification from among a wide spectrum of non-C. albicans species that are increasingly observed as etiology of candidiasis in clinical practice. This phenotypic trait is now seen to be shared with the recently identified species Candida dubliniensis. C. dubliniensis was first reported in 1995 from a case of HIV related oral candidiasis and has been shown to phenotypically resemble C. albicans i.e. both produce germ tubes and chlamydsopes [6]. A tobacco based medium for chlamydosporulation to differentiate C. albicans from C. dubliniensis has been earlier reported [2,3]. Following this observation we intended to compare it with a conventional medium such as cornmeal agar (CMA) to study its efficacy.

We analyzed 46 clinical isolates of C. albicans and 18 reference strains of C. dubliniensis maintained in our laboratory culture collection for chlamydosporulation on tobacco agar (TA) and CMA. The species identity of these test isolates was confirmed based on characteristic colony color on CHROMagar Candida (CHROMagar, Paris), sugar fermentation and assimilation tests [4]. All isolates were freshly subcultured on sabouraud’s dextrose agar with chloramphenicol (50 μg ml⁻¹) prior to testing. TA was prepared as reported earlier and CMA (HiMedia Laboratories, Mumbai, India) with 1% Tween 80 was prepared as per manufacturer’s instructions. Isolates were inoculated by Dalmat technique and incubated at room temperature for up to 10 days. Plates were read microscopically (at 10× and 40×) for presence of chlamydsopes.

Of the 46 isolates of C. albicans tested, 29 (63%) produced chlamydsopes on both CMA and TA. Six isolates (13%) produced chlamydsopes only on TA, whereas three isolates (6.5%) chlamydsoporulated only on CMA. Eight isolates (17.4%) failed to chlamydsoporulate on either media. All reference strains of C. dubliniensis chlamydsoporulated on CMA and TA.

CMA has remained the most commonly employed medium for demonstration of chlamydsopes in C. albicans.

There are several reports of chlamydsore negative C. albicans in literature based on their failure to produce chlamydsopes on CMA [1,5,7]. The findings of this report reveal that some isolates that are negative on CMA may chlamydsoporulate on alternate media such as TA. Hence, we recommend usage of TA in parallel with CMA or for confirmation of isolates that are chlamydsore negative on CMA.

References