(1,3)-β- D-glucan based antifungal therapy interruption in critically ill septic patients with suspected invasive candidiasis: a randomized trial

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Argomento: Altro

Rationale

(1,3)-β-D-glucan (BDG) is a non-culture-based biomarker for the diagnosis of invasive *Candida* infections(ICIs).

Objective

To test whether the use of BDG as a decision making tool for empirical antifungal interruption allows reduction in the duration of antifungals in critically ill patients with suspected ICI.

Methods

A randomized controlled open-label trial was performed including adults admitted to two ICUs with sepsis and risk factors for ICI. Patients were randomly assigned (1:1) to an algorithm in which empirical antifungal therapy was stopped in presence of a negative BDG result or to a control group where antifungal duration was based on clinical rules. The primary endpoint was the duration of antifungals during the first 30 days after enrolment.

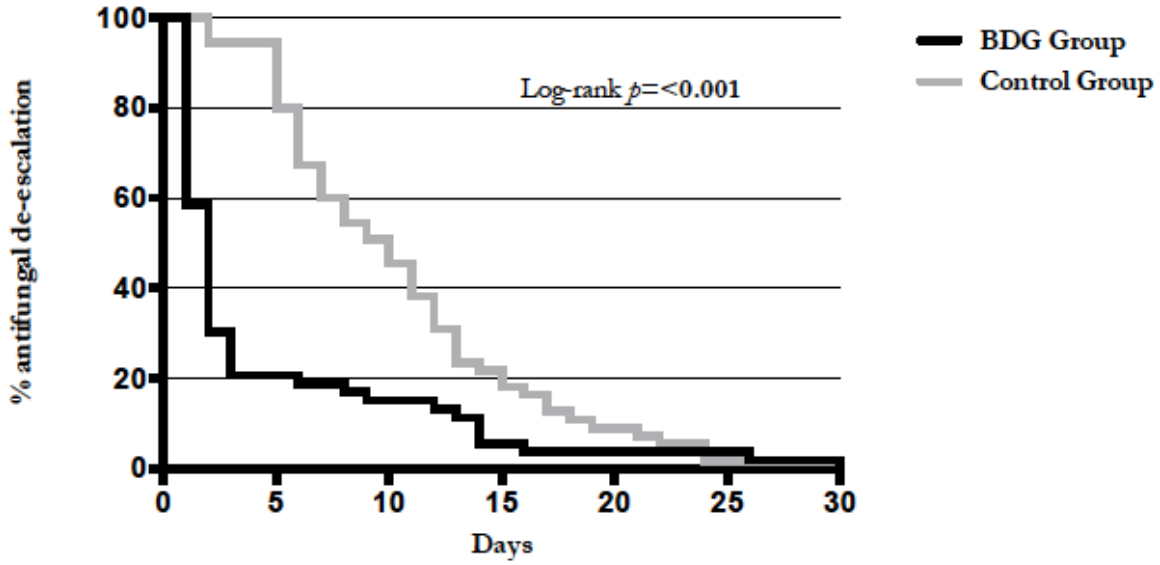
Results

A total of 108 patients were randomized into the BDG (n=53) and control (n=55) groups.Median[IQR] duration of treatment was 2 days[1-3] in the BDG group vs. 10 days [6-13] in the control group (between-group absolute difference in means 6.29, 95%CI 3.94-8.65, p<0.001). Mortality at 30 days was similar between the two groups (28.3% in the BG group vs. 27.3% in controls, p=0.92) as well as the overall rate of documented ICIs(11.3% in the BG group vs. 12.7% in controls, p=0.94) and the length of ICU stay(18 days [7.75-24.25] in the BG group vs. 13 days [7-26] in controls, p=0.23). Mean±SD initial BDG values were higher in presence of ICI compared with patients with false positive results(492±350.5 pg/mL vs. 292.9±173.4 pg/mL, p=0.046), who received a shorter course of antifungal therapy(8 [3-13.25] vs. 16 days [11.75-24] , p=0.018).

Conclusions

Among critically ill patients at risk of ICI, a BDG-guided strategy could reduce the duration of empirical antifungal therapy, without apparent harm effects. A future, multicenter trial is necessary to determine the safety of such algorithm in a lager population.This trial was registered at ClinicalTrials.gov, NCT03117439

Figure 1 Kaplan-Meier plots showing the evolution with time of the percentage of patients who remained on antifungals in the BDG and control groups



No. at risk							
BDG Group	53	16	9	6	6	3	1
Control Group	55	52	28	12	3	3	1

Legend

BG: (1-3)-β-D-Glucan