Conclusion. *Asp*ID had higher sensitivity than *Asp*LFD and *Asp*LFD had higher specificity than *Asp*ID. Using both tests in combination did not improve the ability to diagnose IPA in patients with classic risk factors.

Disclosures. **All authors:** No reported disclosures.

2043. T2-*Candida* (T2MR) vs. B-D-Glucan (BDG) for Preemptive Antifungal Stewardship in the Intensive Care Unit (ICU)

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Session: 230. Diagnostics: Mycology
Saturday, October 6, 2018: 12:30 PM

Background. Timely empiric antifungal therapy is essential in the management of candidemia but must be weighed with the risks of overuse. The purpose of this study was to compare preemptive antifungal therapy and outcomes following a negative T2MR or BDG test result among ICU patients.

Methods. IRB-approved, quasi-experiment in a four hospital system, May 2014–October 2017. T2MR implemented November 2015. Inclusion: preemptive anidulafungin (AFG), negative blood culture(s) and either a negative BDG by system guideline interpretation or T2MR. Exclusions: transplant, neutropenia, or another documented indication for antifungals. Primary endpoint: days of preemptive AFG. Secondary outcomes: ICU and hospital length of stay, incidence of invasive candidiaisis after discontinuation of preemptive therapy, reinitiation of antifungal therapy in the index admission, and inpatient mortality. Early discontinuation defined as single dose only.

Results. A total of 179 patients included: BDG n = 79, T2MR n = 100. Median age: BDG 63 (50, 71); T2MR 59 (50, 70). Baseline SOFA score: 8 (6,11) BDG; 12 (8,15) T2MR. *Candida* score ≥ 3: 43 and 41%, respectively. Preemptive AFG: 2 (1,5) days BDG and 1 (1,2) days T2MR (P < 0.001). Subsequent proven candidemia: 2 (2.5%) BDG; 1 (1%) T2MR. Antifungal reinitiated: 13 (17%) BDG; 12 (12%) T2MR. Mortality: 35 (44%) BDG, 59 (59%) T2MR, P = 0.07. AFG was discontinued early in 91 (51%) patients. T2MR was the only characteristic associated with early D/C (Table 1).

Conclusion. T2MR testing facilitates use of early preemptive echinocandin therapy in ICU patients and minimizes unnecessary prolonged therapy when compared with use of BDG.

Table 1. Early Discontinuation

	Early D/C (n = 91)	Continuation (n = 88)	UnadjOR (95% CI)
T2MR	59 (65%)	41 (47%)	2.1 (1.2–3.9)
SOFA > 7	74 (81%)	70 (79%)	1.1 (0.5–2.3)
Vasopressors	45 (50%)	50 (57%)	0.7 (0.4–1.3)
Candida score > = 3	35 (39%)	40 (46%)	0.8 (0.4–1.4)
Severe sepsis	86 (95%)	82 (93%)	1.3 (0.4–2.3)
Surgery	25 (28%)	30 (34%)	0.7 (0.4–1.4)
TPN	7 (8%)	11 (13%)	0.6 (0.2–1.6)
Multifocal colonization	7 (8%)	12 (14%)	0.5 (0.2–1.4)

Disclosures. **G. Alangaden**, T2 Biosystems: Speaker's Bureau, Educational grant and Speaker honorarium.

2044. Utility of Serum B-D Glucan Assay for Diagnosis of Invasive Fungal Infections in Solid Organ Transplant Recipients

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Session: 230. Diagnostics: Mycology
Saturday, October 6, 2018: 12:30 PM

Background. B-D glucan (BDG) assay is a noninvasive test for presumptive diagnosis of invasive fungal infections (IFI). The utility of BDG assay and cut off values for positive, intermediate or negative test has been primarily studied in patients with hematological malignancies. However, the role of BDG in solid-organ transplant (SOT) recipients is not well described. The aim of this study was to evaluate the utility of serum BDG assay for IFI diagnosis in SOT recipients.

Methods. We retrospectively reviewed 200 patients who underwent SOT at Mayo Clinic and had BDG assay done for suspected IFI between January 1, 2013 and April 1, 2018. IFI cases were classified as proven, probable, and possible using EORTC/MSG criteria. Cases where BDG assay was used for treatment response follow-up or where results were inconclusive were excluded. BDG assay was performed at Viracor Eurofins Clinical Diagnostics lab. For the purpose of this study, a value of ≥80 pg/mL was considered positive and <80 pg/mL (intermediate or negative) was considered negative.

Results. A total of 117 tests from 104 patients met study inclusion criteria. The mean patient age was 56.2 years and 71 (60.7%) were male. Type of SOT included kidney (64), liver (30), heart (26), pancreas (6), and lung (6). BDG assay was positive in seven out of 10 invasive aspergillosis, two out of 3 invasive candidiasis, three out of four pulmonary coccidioidomycosis, and one *Pneumocystis jirovecii* pneumonia (Table 1). Overall, BDG assay was positive in 72.7% of cases (16/22) where a BDG containing organism was the etiology of invasive infection (sensitivity). It was false-positive in seven cases where a BDG containing organism was not identified. Overall specificity of the assay was 92.6% (Table 2).

Conclusion. BDG assay is a useful adjunctive diagnostic aid for distinguishing IFI cases from those without IFI in SOT recipients.

Table 1

Organism	BDG Positive	BDG Negative
Proven Aspergillosis (4)	3	1
Probable Aspergillosis (5)	3	2
Possible Aspergillosis (1)	1	0
Ochroconis infection (1)	1	0
Other IFI (pathology and smear positive with negative culture) (2)	2	0
PCP (1)	1	0
Invasive Candidiasis (3)	2	1
Pulmonary Histoplasmosis (1)	0	1
Pulmonary coccidioidomycosis (4)	3	1
Other (non BDG) diagnoses (95)	7	88

Table 2

	IFI Present	IFI Absent	Total
BDG positive	16	7	23
BDG negative	6	88	94
Total	22	95	

Disclosures. **M. R. Sohail**, TyRx Inc.: Investigator, Research support; Medtronic Inc.: Investigator, Research support; Medtronic Inc.: Consultant, Speaker honorarium; Spectranetics: Consultant, Speaker honorarium; Boston Scientific Corp: Consultant, Speaker honorarium.

2045. Pitfalls in the Use of MALDI TOF Mass Spectrometry for the Identification of Problematic Yeast Isolates from a Historical Collection

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Session: 230. Diagnostics: Mycology
Saturday, October 6, 2018: 12:30 PM

Background. The identification of yeast traditionally entails macroscopic/microscopic findings and biochemical testing. Recently, MALDI TOF MS has replaced traditional methods for identification as a proposed new standard. We performed identification of previously unidentifiable yeasts from a collection in the United States.

Methods. The Mycoses Study Group (MSG) collected 2,947 *Candida* isolates from 1,911 patients as part of two U.S. studies between 1995 and 1999. The identification of the isolates was done in 2002 using API 20 c aux with supplemented standard mycological and biochemical test (corn meal agar, germ tube and the Murex ID system). Ninety-four isolates could not be identified at that time. For this study, the isolates were defrosted, plated on Sabureau Dextrose agar, and incubated at 30°C for 48 hours. We then sub-cultured again in Blood Agar. Isolates when then tested by MALDI TOF MS following the methodology for the Bruker MALDI biotyper.

Results. In the first attempt, 65/94 (69%) isolates were identified. The remaining 29 samples were re-tested with a yield of 21/29 (72.4%) identified isolates. The remaining isolates had to be identified with another round of MALDI TOF and further biochemical testing. The table below shows the final identification of the isolates.

Conclusion. MALDI TOF MS is rapidly becoming a reference method for yeast identification. However, in a historical collection of yeast that could not be identified by conventional biochemical methods, it took up to three rounds of MALDI TOF MS with a yield of ~70% per round, and additional biochemical testing, for identification of all isolates. Continuing validation of MALDI TOF MS for identification of difficult yeast isolates is warranted.