

INTISARI

Latar Belakang: Penyakit jamur invasif merupakan penyebab signifikan morbiditas dan mortalitas yang kejadiannya terus meningkat di seluruh dunia. Jamur sebagai organisme komensal oportunistik dapat menjadi patogen bila terjadi perubahan respon imunitas inang dan invasi jamur ke situs yang seharusnya steril. Pasien dengan sakit kritis yang dirawat di instalasi rawat intensif berisiko lebih tinggi untuk terpapar penyakit jamur invasif. Hal ini selain berdampak terhadap prognosis pasien juga berkontribusi terhadap peningkatan lama rawat dan peningkatan biaya yang tinggi. Faktor risiko penyakit jamur invasif diduga berkaitan dengan faktor komorbiditas pasien, tindakan invasif, dan penggunaan obat-obatan immunosupresif. Studi mengenai penyakit jamur invasif dan faktor risikonya di Indonesia masih sangat terbatas.

Tujuan: mengidentifikasi faktor risiko penyakit jamur invasif pada pasien yang dirawat di instalasi rawat intensif RSUP Dr. Sardjito

Metode: Penelitian ini telah dilaksanakan dengan desain kohort retrospektif di Instalasi Rekam Medik RSUP Dr Sardjito Yogyakarta dengan mencari data rekam medis pasien yang dirawat di Instalasi Rawat Intensif RSUP Dr. Sardjito dan dilakukan kultur jamur mulai 1 Januari 2020 sampai 31 Desember 2022. Faktor risiko yang diteliti adalah diabetes mellitus, neoplasma, penggunaan steroid, penggunaan antibiotik spektrum luas, sepsis, kateter vena sentral, kateter hemodialisa, pasca operasi abdomen, nutrisi parenteral total, ventilator mekanik, dan lama rawat di IRI. Hubungan faktor risiko dianalisis dengan analisis bivariante dengan Chi square dan dilanjutkan dengan analisis multivariat regresi logistik dengan signifikansi $p < 0,05$.

Hasil: Total subyek penelitian adalah 506 pasien, dengan mayoritas subyek perempuan (52%), median usia 57 tahun dengan kejadian penyakit jamur invasif 89%. Sampel kultur jamur positif paling banyak didapatkan dari urine dengan dominasi spesies *Candida sp* (89.1%). Analisis multivariat menunjukkan bahwa diabetes mellitus (OR 3,123; CI 95% 1,266-7,703; $p=0,013$) dan sepsis (OR 2,694; CI 95% 1,384-5,245; $p=0,004$) secara independen berpengaruh terhadap terjadi penyakit jamur invasif di IRI.

Kesimpulan: Diabetes mellitus dan sepsis merupakan faktor risiko terjadinya penyakit jamur invasif di instalasi rawat intensif.

Kata Kunci. Penyakit jamur invasif, faktor risiko, pasien kritis, instalasi rawat intensif, kandidiasis invasif, mikosis invasif

ABSTRACT

Background: *Invasive fungal disease is a significant cause of morbidity and mortality whose incidence continues to increase worldwide. Fungi as opportunistic commensal organisms can become pathogenic if there is a disruption in the host's immune response and fungal invasion of a site that supposed to be sterile. Critically ill patients treated in intensive care units are at higher risk of exposure to invasive fungal diseases. Apart from having an impact on patient prognosis, this also contributes to an increase in length of stay and high costs. Risk factors for invasive fungal disease are thought to be related to patient comorbidities, invasive procedures, and use of immunosuppressive drugs. Studies regarding invasive fungal diseases and their risk factors in Indonesia are still very limited.*

Aim: *This study aimed to identify the risk factors for invasive fungal disease in patients treated at the intensive care unit of RSUP Dr. Sardjito.*

Methods: *This research was carried out with a retrospective cohort design at the Medical This research was carried out with a retrospective cohort design at the Medical Records Installation at Dr Sardjito Hospital, Yogyakarta by searching for medical record data of patients treated at the Intensive Care Unit Dr Sardjito Hospital and fungal culture was carried out from January 1 2020 to December 31 2022. The risk factors studied were diabetes mellitus, neoplasms, use of steroids, use of broad-spectrum antibiotics, sepsis, central venous catheters, hemodialysis catheters, post-abdominal surgery, total parenteral nutrition, mechanical ventilation, and length of stay at IRI. The relationship between risk factors was analyzed using bivariate analysis with Chi square and continued with multivariate logistic regression analysis with a significance of $p < 0.05$.*

Result: *Subjects enrolled in this research were 506 patients, with the majority of subjects being female (52%), median age 57 years with an incidence of invasive fungal disease of 89%. Most positive fungal culture samples were obtained from urine with a predominance of *Candida sp* species (89.1%). Multivariate analysis showed that diabetes mellitus (OR 3,123; CI 95% 1,266-7,703; $p=0,013$) and sepsis (OR 2,694; CI 95% 1,384-5,245; $p=0,004$) independently influenced the occurrence of invasive fungal disease in ICU.*

Conclusion: *Diabetes mellitus and sepsis are risk factors for invasive fungal disease in intensive care settings.*

Keywords: *Invasive fungal disease, risk factors, prevalence, critically ill patients, intensive care unit, invasive candidiasis, invasive mycosis*