ABSTRACT

Multidrug Resistance Organisms (MDROs) is defined as bacteria which resistance to three or more antibiotic classes. Incidence rates of MDROs in ICU is higher than in other treatment unit. The main risk factor of MDROs is inappropriate and long term use of antibiotic and history treated in hospital. Meanwhile, the other risk factor of MDROs are Immunocompromised, advanced age, length of stay, treatment in ICU, severity of illness, underlying disease such as chronic kidney disease, insulin-dependent diabetes mellitus, dermatitis or skin lesion, invasive procedures, such as dialysis, and the use of medical devices that enter the body such as urinary catheters, vascular catheter, mechanical ventilation, dan previous colonization with Multidrug Resistance Organisms (MDROs). One of effort to prevent MDROs is to cut bacterial transmission from infected patient to another patient by health worker hands with hand hygiene. The purpose of this study was to determine the relationship between risk factor of MDROs which are inappropriate and long term use of antibiotic, the use of medical devices, length of stay in ICU and compliance of hand hygiene by health worker with incidence MDROs in ICU Y Hospital Surabaya. This study used observational analytic study and case control design. The sample size in this study was 20 people for each group cases and controls by simple random sampling technique. To determine the relationship and odd ratio this study used chi-square test and epi info software. The result showed that all of the risk factors which are the duration of antibiotic use, the use of medical devices which are infusion and ventilator, the length of stay in ICU, and the compliance of hand hygiene by health workers have the relationship with MDROs incidence. The duration of antibiotic use for > 5 days (OR=10.23), the use of medical devices ventilator (OR=9.00), the length of stay in ICU for >15 days were risk to infected MDROs infection, meanwhile the use of medical devices infusion (OR= 0.14) and the compliance of hand hygiene by health worker (OR=0.17) were as protective factor for MDROs. It can be concluded that the most associated for risk factor of incidence MDROs is the duration use antibiotic use. Therefore appropriate use of antibiotic and compliance of hand hygiene by health worker can reduce risk of MDROs infections.

Key words : Multidrug Resistance Organisms (MDROs), risk factor, hand hygiene