

## INTISARI

Pencampuran sediaan intravena yang tidak dilakukan secara aseptik berisiko tinggi menyebabkan infeksi nosokomial karena kontaminasi bakteri. Penelitian ini bertujuan untuk mengetahui persentase kesesuaian pelaksanaan teknik aseptik pada pencampuran sediaan intravena, mengetahui hubungan antara pelatihan teknik aseptik dan kesesuaian pelaksanaan teknik aseptik, serta mengetahui jenis bakteri yang mengontaminasi sediaan intravena dan lingkungan tempat pencampuran.

Penelitian dilakukan di RS Akademik UGM dan Lab. Mikrobiologi FK-KMK UGM menggunakan desain *cross sectional* dan analisis data secara deskriptif analitik. Pengambilan data dilakukan dengan wawancara terkait ruangan dan observasi langsung untuk mengamati teknik aseptik dan pelabelan obat baik pada area *non clean room* dan *clean room* kemudian dibandingkan dengan Standar ASHP Tahun 2014 dan buku standar lainnya yang relevan menggunakan lembar *checklist* observasi pencampuran sediaan intravena. Kontaminasi bakteri dilihat melalui uji sterilitas metode inokulasi langsung dan identifikasi bakteri menggunakan reagen kit API dan BBL *Crystal*. Sampel penelitian adalah proses pencampuran sediaan intravena sebanyak 125 sampel dan personel sebanyak 73 sampel yang diambil menggunakan metode *consecutive sampling*, serta 9 sampel kontaminasi bakteri terdiri dari 3 sampel sediaan intravena, 4 sampel berupa bakteri dari *swab* telapak tangan dan mukosa hidung, dan 2 sampel berupa bakteri dari *swab* lingkungan tempat pencampuran.

Hasil penelitian menunjukkan kesesuaian dalam mencuci tangan, penggunaan APD, dan pencampuran sediaan intravena sebesar 68,84%, 63%, dan 42,14%. Tidak terdapat hubungan secara bermakna antara pelatihan teknik aseptik dan kesesuaian teknik aseptik ( $p = 0.804$ ). Tidak terdapat kontaminasi bakteri pada sediaan intravena yang diuji sterilitasnya. Hasil *swab* tangan personel ditemukan bakteri *Staphylococcus epidermidis*. Hasil *swab* mukosa hidung personel ditemukan bakteri *Corynebacterium spp.*, *Klebsiella pneumoniae*, *Kytococcus sedentarius*, dan *Staphylococcus epidermidis*. Hasil *swab* lingkungan *non clean room* ditemukan bakteri *Kytococcus sedentarius* dan *Staphylococcus epidermidis* sedangkan di area *clean room* tidak ditemukan bakteri. Kontaminasi bakteri yang ditemukan bersifat patogen dan *non* patogen sehingga kebersihan personel maupun lingkungan perlu diperhatikan dalam proses pencampuran intravena.

Kata kunci : evaluasi, kontaminasi, pencampuran sediaan intravena, teknik aseptik

## ABSTRACT

*Non-aseptic mixing of intravenous preparations poses a high risk of causing nosocomial infections due to bacterial contamination. This research aims to reveal percentage of aseptic technique implementation conformity in mixing intravenous preparations, correlation between training and conformity of aseptic technique implementation, and types of bacteria contaminating intravenous preparations and mixing environment.*

*The research was conducted at the UGM Academic Hospital and Microbiology Laboratory of FMPHN UGM using cross sectional design and data were analyzed using descriptive analytical approach. Data were collected using interviews concerning rooms and direct observation to observe aseptic techniques and drug labeling including non-clean room and clean room areas and compared with the 2014 ASHP Standard and other relevant standard books using an observation checklist sheet for mixing intravenous preparations. Bacterial contamination was observed through direct inoculation method sterility test and bacteria were identified using API reagent kit and BBL Crystal. Samples were 125 samples from the intravenous preparations mixing process and 73 samples from personnel taken using consecutive sampling method, 9 bacterial contamination samples consisting of 3 intravenous preparations samples, 4 bacteria samples from palm and nasal mucosa swabs, and 2 bacteria samples from environmental swab.*

*The results indicated the conformity of hand washing, use of personal protective equipment, and mixing of intravenous preparations was 68,84%, 63%, and 42,14%. There was no significant correlation between training and conformity of aseptic technique ( $p = 0.804$ ). The intravenous preparations, whose sterility were tested, were not contaminated. The results of personnel's palm swab indicated *Staphylococcus epidermidis*, personnel's nasal mucosa swab indicating *Corynebacterium* spp., *Klebsiella pneumoniae*, *Kytococcus sedentarius*, and *Staphylococcus epidermidis*, non-clean room environmental swab indicating *Kytococcus sedentarius* and *Staphylococcus epidermidis*. No bacteria were found in the clean room area. The bacterial contamination were pathogenic and non-pathogenic. Therefore, personnel and environmental hygiene should be considered in the intravenous mixing process.*

**Keywords:** *evaluation, contamination, mixing of intravenous preparation, aseptic technique*