

921. Prevalence of Hepatitis C Infection and Epidemiology of Infective Endocarditis in Intravenous Drug Users in Central Kentucky

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Background. During recent years, we have observed an increase in admissions for infective endocarditis (IE) at our academic center. We proposed a retrospective study to determine the prevalence of hepatitis C virus (HCV) infection and describe the epidemiology of IE in intravenous drug users (IDU) in Kentucky.

Methods. This retrospective, IRB approved study evaluated all adult intravenous drug users admitted to a teaching facility serving central Kentucky diagnosed with infective endocarditis based on the modified Duke's criteria from January 2010 to December 2012. Data collected included demographics, blood culture results, valve

involvement, surgery, and outcomes. In addition, patients were screened for HIV and hepatitis C virus (HCV).

Results. Overall, 105 subjects (65 males and 40 females) between 18 and 63 years of age (mean 35) were evaluated. The majority (73%) of these patients were from rural Kentucky. The most common organism isolated from blood cultures was *Staphylococcus aureus* (50%), followed by *Streptococcus viridans* (16%) and *Enterococcus species* (13%). Of the *S. aureus* isolates, 59% were methicillin sensitive. The majority of patients had left sided endocarditis (56%) with an overall in-hospital mortality of 25%. There was no significant difference in mortality based on gender or affected valve type. However, mortality was significantly higher for patients that did not undergo surgery compared to those that did have surgery (39% vs 10%, $p = 0.0022$) Furthermore, 76% (68/90) of patients evaluated for HCV were positive. Whereas, none of the patients tested for HIV were positive (N=99). Mortality was significantly higher for HCV patients than non-HCV patients (32% vs 5%, $p = 0.0178$).

Conclusion. The prevalence and mortality associated with HCV compared to HIV in IDU diagnosed with infective endocarditis from rural Appalachia Kentucky was alarming. More studies evaluating the relationship between HCV and infective endocarditis should be performed.

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