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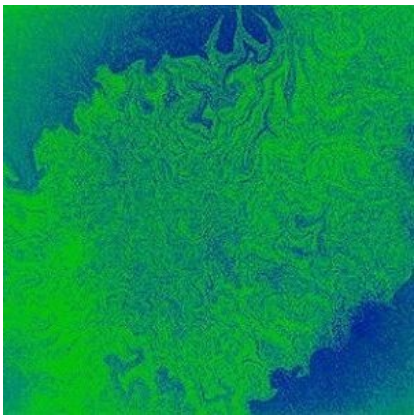
C. diff Colonisation and Risk for Subsequent Infections



According to Johns Hopkins researchers, patients admitted to an intensive care unit (ICU) for Clostridium difficile infection were at risk for developing subsequent C. difficile infections. Their finding is reported in the journal *Infection Control & Hospital Epidemiology* .

“Importantly in this study, colonisation with toxigenic C. difficile on admission was identified as a strong and independent predictor for development of subsequent [C. difficile infection,]” say Trish M. Perl, MD, MSc, of the Johns Hopkins University School of Medicine, and co-authors.

The prospective cohort study was conducted from April to July 2013. Adult patients (n = 542) were screened for C. difficile within 48 hours of admission to the ICU at Johns Hopkins Hospital (Baltimore, MD). Rectal swabs were used to screen for C. difficile at admission and weekly until ICU discharge. Patients also were monitored by medical chart review for one month after discharge.

Dr. Perl and colleagues found that 17 patients (3.1 percent) admitted had toxigenic C. difficile colonisation on admission, and an additional three patients had a subsequent C. difficile infection during weekly follow-up. Colonisation with toxigenic C. difficile before admission was associated with developing infection (*RR* = 10.29; 95% CI, 2.24–47.4), as was colonisation during hospitalisation (*RR* = 15.66; 95% CI, 4.01–61.08). After adjusting for confounders, the researchers found colonisation before admission (*RR* = 8.62; 95% CI, 1.48 –50.25) and during hospital stay (*RR* = 10.93; 95% CI, 1.49–80.2) were independent risk factors for infection.

Age, use of proton pump inhibitors or antibiotics or prior healthcare visits up to 12 weeks were not associated with C. difficile infection, the Johns Hopkins team notes. During their hospital stays, 1.5 percent of patients developed C. difficile infection; four patients were diagnosed within one month of discharge.

The study suggests that traditional infection control measures "may not suffice to avoid further increase in disease burden," the researchers point out. "For patients colonised with toxigenic C. difficile, the challenge for disease prevention is not to prevent exposure but to reduce the risk of C. difficile toxin expression by restricting use of antibiotics, acid-suppressive agents and narcotics,” they add.

Source: Johns Hopkins University School of Medicine
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Published on : Tue, 18 Aug 2015

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