Abstracts of current literature on epidemiology, diagnosis, and treatment

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EPIDEMIOLOGY OF TRICHOMONAS VAGINALIS IN ADOLESCENT WOMEN

In order to determine the prevalence, incidence, natural history, and response to treatment of *Trichomonas vaginalis* infection in adolescent women (aged 14–17 years), the authors enrolled adolescents who were not pregnant and followed them for up to 27 months. Vaginal swab samples were obtained during quarterly clinic visits and were self-obtained weekly during 12-week diary collection periods. The weekly samples were tested quarterly. Infections were identified by polymerase chain reaction (PCR) and were treated with 2.0 g of oral metronidazole. Participants who returned for at least 1 quarterly clinic visit were included in the analysis. At enrollment, 6% (16/268) of all participants were infected with *T. vaginalis*. Of participants with at least 3 months of follow-up, 23.2% (57/245) had at least 1 infection episode; 31.6% (18/57) experienced multiple episodes. A total of 72 incident infection episodes were diagnosed. When treatment was not documented, weekly samples from participants were positive for up to 12 consecutive weeks. After treatment, *T. vaginalis* DNA was undetectable within 2 weeks in all but 3 patients. The incidence of *T. vaginalis* infection is high among adolescent women, and reinfection is common. This study may underestimate the prevalence as not all participants were sexually active. Untreated infections may last undetected for 3 months or longer. Treatment with oral metronidazole is effective.

van Der Pol B, Williams JA, Orr DP, et al. Prevalence, incidence, natural history, and response to treatment of Trichomonas vaginalis *infection among adolescent women. J Infect Dis 2005;192:2039–44.*

AN EPIDEMIC, TOXIN GENE-VARIANT STRAIN OF CLOSTRIDIUM DIFFICILE

In order to determine whether increased rates and severity of *Clostridium difficile*-associated disease in the United States are due to the emergence of a new strain of *C. difficile* with increased virulence, resistance, or both, researchers collected a total of 187 *C. difficile* isolates from 8 health care facilities in 6 states where outbreaks of *C. difficile*-associated disease had occurred between 2000 and 2003. Isolates were characterized by restriction-endonuclease analysis (REA), pulsed-field gel electrophoresis (PFGE), and toxinotyping and then compared to analyses of over 6000 isolates acquired before 2001. PCR was used to detect a recently described binary toxin, CDT, and a genetic deletion, tcdC, that may increase production of toxins. A strain composed of closely related isolates was found by both REA and PFGE. The strain was identified as belonging to REA group (BI) and PFGE type (NAP1) and was found in specimens collected at all 8 facilities, accounting for at least half of the isolates from 5 facilities. REA group BI was uncommon among isolates from the historic database (14 cases). All study and historical BI/NAP1 isolates were toxinotype III, were positive for the binary toxin CDT, and contained the tcdC deletion. Resistance to gatifloxacin and moxifloxacin was more common in current BI/NAP1 isolates than in non-BI/NAP1 isolates (100% versus 42%; $P < 0.001$); clindamycin resistance was the same in the 2 groups (79%). Unlike the isolates obtained from the 8 facilities, none of the historic BI/NAP1 isolates was resistant to gatifloxacin and moxifloxacin ($P < 0.001$). A previously uncommon strain of *C. difficile* with variations in toxin genes has become more resistant to fluoroquinolones and has emerged as a cause of geographically dispersed outbreaks of *C. difficile*-associated disease.

McDonald LC, Killgore GE, Thompson A, et al. An epidemic, toxin gene-variant strain of Clostridium difficile. *N Engl J Med 2005; 353:2433–41.*

INCIDENCE OF TUBERCULOSIS AMONG HIV-INFECTED PATIENTS RECEIVING HAART

Investigators estimated the incidence of tuberculosis (TB) among HIV-infected, AIDS-free patients receiving highly active antiretroviral therapy (HAART) by analyzing patient data obtained from 17,142 patients starting HAART who were enrolled in 12 cohorts from Europe and North America. During the first 3 years of HAART, 173 patients developed TB (4.69 cases per 1000 person-years), with 88 cases occurring during 28,846 person-years of follow-up after 6 months of HAART (3.1 cases per 1000 person-years). In multivariable analysis, the incidence rate was lower for men who have sex with men as compared with injection drug users, heterosexuals, those with other suspected modes of transmission, and those with a higher CD4+ count at the time of HAART initiation. Multivariable analyses revealed that a low baseline CD4+ count, a low 6-month CD4+ count, and a 6-month HIV RNA level exceeding 400 copies/mL were significantly associated with the risk of acquiring TB after 6 months of HAART. Initial immunodeficiency when HAART is initiated and the response to HAART are important determinants of the risk of TB. However, this risk remains appreciable even among those with a good response to HAART, suggesting that other interventions may be needed to control the TB epidemic in the HIV-infected population.

Girardi E, Sabin CA, d'Arminio Monforte A, et al. Incidence of tuberculosis among HIV-infected patients receiving highly active antiretroviral therapy in Europe and North America. The Antiretroviral Therapy Cohort Collaboration. Clin Infect Dis 2005;41:1772–82.

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