Abstracts of current literature on epidemiology, diagnosis, and treatment

Series Editor: Jihad Slim, MD

HPV DNA TESTING VERSUS CYTOLOGIC TESTING FOR CERVICAL SCREENING

Researchers randomly assigned women (aged 29–56 yr) who were enrolled in a regular cervical screening program in the Netherlands to conventional cytologic testing combined with human papillomavirus (HPV) DNA testing (n = 8575) or to cytologic testing alone (n = 8580) to determine whether HPV DNA testing improves the efficacy of cervical screening. After 5 years, combined cytologic and HPV DNA testing were performed in both groups. The primary outcome measure was the number of cervical intraepithelial neoplasia grade 3 or worse (CIN3+) lesions detected. Women were excluded if they had a history of CIN2+ or abnormal cytologic screening within the preceding 2 years, if they had undergone hysterectomy, or were age 57 years or older. At baseline, 70% more CIN3+ lesions were detected in the intervention group than in the control group (68/8575 versus 40/8580 [95% confidence interval {CI}, 15–151]; $P = 0.007$). The number of CIN3+ lesions detected in the subsequent round was 55% lower in the intervention group than in the control group (24/8413 versus 54/8456 [95% CI, 28–72]; $P = 0.001$). The number of CIN3+ lesions over the 2 rounds did not differ between groups. Use of HPV DNA testing in cervical screening leads to earlier detection of CIN3+ lesions, which may permit extension of the screening interval.

Bulkmans NW, Berkhop J, Rozendaal L, et al. Human papillomavirus DNA testing for the detection of cervical intraepithelial neoplasia grade 3 and cancer: 5-year follow-up of a randomised controlled implementation trial. Lancet 2007;370:1764–72.

NOVEL RISK FACTORS FOR CLOSTRIDIUM DIFFICILE–ASSOCIATED DISEASE

Investigators conducted a retrospective cohort study in order to determine risk factors for endemic *Clostridium difficile*–associated disease (CDAD). The cohort included all patients admitted in 2003 for at least 48 hours to a tertiary care hospital in St. Louis, MO. Of 36,086 patients admitted, 382 patients were diagnosed with CDAD; 208 patients who had recurrent CDAD were excluded. Multivariate analysis revealed the following statistically significant independent risk factors for CDAD: increasing age (odds ratios [ORs] for 45–59 yr, 60–74 yr, and > 74 yr: 1.9, 2.4, and 3.5, respectively); admission(s) in the previous 60 days (OR, 2.1); low or very low albuminemia (ORs, 1.4 and 1.8, respectively); leukemia and/or lymphoma (OR, 2.3); mechanical ventilation (OR, 1.9); antimotility drugs (OR, 1.3); histamine-2 blockers (OR, 2.0); proton pump inhibitors (OR, 1.6); greater than 7-day course of intravenous vancomycin (OR, 1.9); greater than 7-day course of fluoroquinolones (OR, 2.5); greater than 7-day course of first- or third-generation cephalosporins (ORs, 5.6 and 9.2, respectively); and fourth-generation cephalosporins (ORs for 0–7 days and > 7 days, 2.2 and 3.3, respectively). CDAD pressure (a surrogate variable for colonization pressure) also was an independent risk factor for CDAD, and an exposure-dependent relationship with increasing CDAD pressure was demonstrated (OR for CDAD pressure of 0.3–1.4, 2.9; OR for CDAD pressure > 1.4, 4.0). Metronidazole, however, was associated with lower risk of developing CDAD (OR, 0.5). More studies are needed to evaluate the relationship between CDAD and its risk factors.

Dubberke ER, Reske KA, Yan Y, et al. Clostridium difficile*–associated disease in a setting of endemicity: identification of novel risk factors. Clin Infect Dis 2007;45:1543–9.*

ANTIBIOTICS AND TOPICAL NASAL STEROIDS FOR TREATING ACUTE MAXILLARY SINUSITIS

Between 2001 and 2005, the authors conducted a double-blind, randomized, placebo-controlled factorial trial to determine the efficacy of amoxicillin (500 mg 3 times daily for 7 days) and topical budesonide (200 μg in each nostril once daily for 10 days) individually or in combination for treating acute maxillary sinusitis. A total of 240 adults (aged ≥ 16 yr) with acute non-recurrent sinusitis (defined as the presence of ≥ 2 diagnostic criteria: purulent rhinorrhea with unilateral predominance, local pain with unilateral predominance, purulent rhinorrhea bilateral, presence of pus in the nasal cavity) were randomized to 1 of 4 treatment groups: antibiotic and nasal steroid; placebo antibiotic and nasal steroid; antibiotic and placebo nasal steroid; and placebo antibiotic and placebo nasal steroid. The primary endpoint was the proportion of patients clinically cured at day 10 using patient symptom diaries and the duration and severity of symptoms. The proportions of patients with symptoms lasting 10 or more days were 29 of 100 (29%) for amoxicillin versus 36 of 107 (33.6%) for no amoxicillin (adjusted OR, 0.99 [95% CI, 0.57–1.73]); and 32 of 102 (31.4%) for topical budesonide versus 33 of 105 (31.4%) for no budesonide (adjusted OR, 0.93 [95% CI, 0.54–1.62]). Secondary analysis suggested that nasal steroids were significantly more effective in patients with less severe symptoms at baseline. Neither an antibiotic nor a topical steroid alone or in combination was effective as a treatment for acute sinusitis in the primary care setting.

Williamson IG, Rumsby K, Benge S, et al. Antibiotics and topical nasal steroid for treatment of acute maxillary sinusitis: a randomized controlled trial. JAMA 2007;298:2487–96.

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