

Infectious Diseases Update

Abstracts of current literature on epidemiology, diagnosis, and treatment

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RAPID DETECTION OF GROUP B STREPTOCOCCI IN PREGNANT WOMEN AT DELIVERY

A study evaluated the efficacy of two polymerase chain reaction (PCR) assays for routine screening of pregnant women for group B streptococci (GBS) at the time of delivery. Researchers studied 112 pregnant women who had been hospitalized for delivery. Specimens of anal, vaginal, and combined vaginal and anal secretions were obtained from all the women soon after admission. Specimens were screened using the standard culture method, a conventional PCR assay, and a rapid, GBS-specific fluorescence-based PCR assay. Among the subjects tested, the results of both PCR assays of the combined vaginal and anal specimens were positive for 32 (28.6%) of the women. Rupture of membranes did not significantly influence the ability of the PCR assays to identify carriers of GBS. Overall, GBS were detected slightly more often by the PCR assays than by culture. As compared with the culture results, the sensitivity of both PCR assays was 97%, and the negative predictive value was 98.8%. The specificity and the positive predictive value of both PCR assays were 100%. The amount of time required to obtain results was 30 to 45 minutes for the new PCR assay, 100 minutes for the conventional PCR assay, and at least 36 hours for culture. The study concluded that GBS can be detected rapidly and reliably by a PCR assay of combined vaginal and anal secretions from pregnant women at delivery.

Bergeron MG, Ke D, Menard C, et al: Rapid detection of group B streptococci in pregnant women at delivery. *N Engl J Med* 2000; 343:175-179.

HELICOBACTER PYLORI INFECTION AND GASTRIC CANCER: THE HISAYAMA STUDY

A prospective study examined the impact of *Helicobacter pylori* infection on gastric cancer occurrence in a general Japanese population (Hisayama, Japan) stratified according to sex. A total of 2602 subjects 40 years or older (1070 men, mean age 57 years; 1532 women, mean age 59 years) without a history of gastrectomy or gastric cancer were classified according to the status of serum IgG antibodies to *H. pylori* and were enrolled in the study. This population was observed for 9 years (1988-1997) by repeated health checkups every 1 to 2 years. Infection with *H. pylori* was more common in men (71.5%) than in women (62.4%; $P < .001$). The age-adjusted incidence of gastric cancer was 5.3 and 1.3 per 1000 person-years for men and women, respectively; the incidence was significantly higher in men than in women ($P < .001$). Whereas no significant difference in the age-adjusted incidence was found between women seropositive and seronegative for *H. pylori* (1.2 vs 1.1), the incidence was significantly higher in seropositive than seronegative men (6.2 vs 2.5), with a relative risk of 2.59 (95% confidence

interval, 1.03-6.50; $P = .05$). These results were similar even after controlling for other risk factors in multivariate analysis. It was estimated that 40.1% of gastric cancers for men in this cohort were attributable to *H. pylori* infection. The study concluded that a significant relationship exists between infection with *H. pylori* and subsequent occurrence of gastric cancer for men, but not for women.

Yamagata H, Kiyohara Y, Aoyagi K, et al: Impact of *Helicobacter pylori* infection on gastric cancer in a general Japanese population: the Hisayama study. *Arch Intern Med* 2000;160:1962-1968.

AIDS ACROSS EUROPE: THE EUROSIDA STUDY

A prospective observational multicenter study assessed changes over time in the incidence of AIDS-defining illnesses (ADIs) since the introduction of highly active antiretroviral treatment (HAART). Incidences of ADIs were measured both overall and within CD4+ lymphocyte count strata. More than 7300 patients with HIV-1 from 52 outpatient centers across Europe (including Israel) were enrolled in 1994 and 1995, and were followed up at 6-month intervals until the spring of 1999. Data recorded at each follow-up visit included CD4+ lymphocyte counts measured since the last follow-up, viral load measurements, starting and stopping dates of any antiretroviral drugs, and the use of drugs for prophylaxis against opportunistic infections. Dates of diagnosis of all ADIs were also recorded. The results of the study showed that the CD4+ cell count, viral load, treatment regimens, and incidence of ADIs changed greatly over the study duration. The incidence of ADIs declined from 30.7 per 100 patient-years of observation (95% CI 28.1-33.3) during 1994 to 2.5 per 100 patient-years of observation during 1998 (95% CI 1.9-3.1; $P < 0.0001$, Poisson test for trend). Although incidence of disease decreased, there was a striking increase in the median CD4+ cell count at diagnosis, from 28 cells/ μ L in 1994 to 125 cells/ μ L in 1998 ($P < 0.0001$). However, the decline over time in ADIs was broadly consistent within all CD4+ cell count strata, suggesting that the increased CD4+ cell counts at diagnosis is a consequence of an increased number of patients on HAART who live for longer with higher CD4+ cell counts. The study concluded that the immediate risk of an ADI for a given CD4+ lymphocyte count has declined over time and is significantly lower among patients who are on HAART.

Mocroft A, Katlama C, Johnson AM, et al: AIDS across Europe, 1994-1998: the EuroSIDA study. *Lancet* 2000;356:291-296.

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