Contribute to atherogenesis is supported by the results of several epidemiologic studies, which suggest that Helicobacter pylori [5], cytomegalovirus (CMV) [6], herpes simplex virus (HSV) [7], and Chlamydia pneumoniae [8] may have athero-

genic effects. However, existing epidemiologic data about the association of some of these pathogens with atherosclerosis are conflicting [9]. Moreover, recently published data [10] support the hypothesis that atherosclerosis has an immunopath-

tological component; these data render it improbable that a single infectious agent should assume particular importance in the initiation or progression of athero-


genesis.

Our data for 218 consecutive patients (119 men and 99 women; mean age, 64.6 years [range, 29–83 years]) who underwent coronary angiography support the hypothesis of Witkin et al. [1], that "triggers" such as IL-1RA gene polymorphisms or additional exposure to other pathogens could influence the effect of infectious agents on the development of CAD. Blood samples obtained from all subjects were tested for serologic markers of 6 infectious pathogens (C. pneumoniae, hepatitis A virus, H. pylori, CMV, and influenza virus types A and B). We examined the possible association between seropositivity for a particular microbial agent and angiog-

raphically proven coronary artery disease (defined as ≥1 coronary artery with stenosis >50%-diameter).

Analysis of serologic markers for all 6 microbial agents demonstrated that sero-

positivity for a single pathogen was not a predictor of risk for CAD. In contrast, the number of infectious pathogens to which individuals have been exposed (i.e., the "infectious burden") correlated with the prevalence of CAD. A total of 48.8% of patients with CAD and 31.2% of patients without CAD tested positive for ≥4 of the 6 serologic markers (P = .02); 21.3% of patients with CAD and 9% of patients without CAD tested positive for 5 of the 6 serologic markers (P = .03). Therefore, our data support the hypothesis of Witkin et al. [1] that some "triggers" such as cy-

tokine-receptor gene polymorphisms or additional exposure to other pathogens could influence a patient’s susceptibility to the atherogenic effect of infection with a particular pathogen.

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Candidemia in the Surgical Intensive Care Unit

Sir—We read with great interest the ar-

ticle by Blumberg et al. [1] that reported the results of a multicenter US study of fungemia in the surgical intensive care unit (ICU), in which risk factors and outcomes for 42 candidemic patients were analy-

zed. In our opinion, there were at least 2 surprising and interesting results: (1) the absence of colonization as a predictor of invasive infection and (2) the protective role of previous antifungal therapy (prophylaxis). We retrospectively analyzed data from 75 cases of fungemia that were seen in 4 surgical ICUs of university hospitals in Slovak Republic in 1992–2002. Only 47 (64%) of 75 episodes were caused by Candida albicans, in contrast to the results of the study by Blumberg et al. [1], in which fewer than one-half of strains tested in vitro were identified as C. albicans (16 of 35 strains). The second most common strain was C. glabrata, followed by C. tropicalis. In our study, C. glabrata was responsible for only 6.7% cases of fungemia, which underlines the differences in the eti-

ology of fungemia in patients with and without cancer between Europe and the United States [2, 3]. Similarly, a history of colonization with Candida was not a predictor of fungemia in our group (only 3.3% of fungemic patients in the surgical ICU were colonized).

With regard to the use of prior antifungal therapy or prophylaxis, 16.7% of our patients had received fluconazole or amphotericin B 3–5 days before the onset of fungemia. However, we did not observe a statistically significant difference in mortal-

ity between patients who received prior treatment and those who did not (14.7% vs. 20%), despite the trend (as was ob-

served in Blumberg’s group [1]) toward lower mortality among patients with prior receipt of antifungals.

Finally, we would like to know the overall and attributable mortality among pa-

tients from whom data were analyzed in this valuable study. In our cohort of 75
fungemic patients in the surgical ICU, 54.7% died. This is an extremely high mortality rate, although it is quite difficult to distinguish the degree to which candidemia contributed to mortality. Most patients had severe underlying disease, and fungemia is often accompanied by bacteremia, which also contributes to mortality.

Therefore, the use of both strategies—prophylaxis and early preventive therapy—for high-risk patients is of emerging importance for prospective trials involving patients in the surgical ICU.

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The Value of Suction Drainage Fluid Culture during Clean Orthopedic Surgery

Sr—In support of the results of the study of Bernard et al. [1], we report our experience regarding the value of performing suction drainage fluid culture during aseptic orthopedic surgery. During the year 1996, all consecutive patients at 6 hospitals in southeastern France who underwent clean orthopedic surgery (prosthetic hip or knee implantation) were included in a prospective study to explore the value of drainage fluid culture for prediction of nosocomial wound infection (as defined by the Centers for Disease Control and Prevention [2]). Patients were systematically evaluated both 1 month and 1 year after the surgery to detect possible infection. Patients who underwent septic surgery were excluded.

The study included 733 patients (460 women and 273 men). For more than one-half of patients (377 [51.5%]), the reason for hip or knee replacement was a fracture. The surgical procedures performed were as follows: 520 hip implantations, 59 intermediate implantations of the hip, and 154 total knee implantations. In 76 cases (37.6%), a replacement of implants was performed.

In each center, microbiological analyses were performed using the same technique. First, a sample of fluid from the drain placed near the joint was examined for the presence of neutrophils and bacteria. Secondly, the plates were inoculated using aerobic and anaerobic methods. The American Society of Anesthesiologists score was 1 for 226 patients, 2 for 138 patients, and 3 for 18 patients. Immunosuppression was noted in 12 patients, rheumatoid polyarthritis was noted in 18 patients, and various risk factors were noted in 66 patients. The National Nosocomial Infection Surveillance risk index score was 0 for 523 patients (71.3%), 1 for 195 patients (21.6%), and 2 for 16 patients (2.2%). Antibiotic prophylaxis was administered to 732 patients.

We analyzed the results for 723 patients (98.5%; during follow-up, 7 patients died and 3 patients were not evaluated by the surgeon). Six infections were observed: 4 after hip implant placement, and 2 after knee implant placement. The mean time from surgery to the onset of infection was 28.2 days (range, 11–71 days; median, 19 days). Microbiological analysis of drainage fluid specimens did not allow the prediction of infection or the bacteria responsible for infection (table 1). In accordance with the findings of Bernard et al. [1] and Sorensen et al. [3], we concluded that systematic bacteriological culture of drainage fluid in clean orthopedic surgery is not useful for the detection of infection.

**Participating hospitals.** Hospital Belley, Belley (D. Petitjean and O. Sabot), Hospital Fréjus, Fréjus (J. P. Otto and M. Troade), Hospital Giens, Giens (J. Rebouillet, D. Gontier, and N. Giordano), Hospital Moutiers, Moutiers (T. Gautheron), Hospital Saint-Etienne, Saint-Etienne (E. Farizon and S. Guinament), Hospital Villefranche sur Saone, Villefran-

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