P. aeruginosa Worse Among Hospitalized COPD Patients

The presence of the bacterium in sputum cultures was linked with worse outcomes and a history of smoking.

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NICE, FRANCE — New research suggests that the prevalence of *Pseudomonas aeruginosa* is higher in patients hospitalized for acute chronic obstructive pulmonary disease exacerbation than in ambulatory patients.

Presence of the gram-negative bacterium in sputum was associated with worse functional outcomes and with a strong history of smoking in a study of 188 hospitalized COPD patients, Dr. Carolina Garcia Vidal said at the 16th European Congress of Clinical Microbiology and Infectious Diseases.

Previous studies have reported prevalence rates for *P. aeruginosa* (PA) ranging from 0.5% to 15% in ambulatory patients.

In one published study, PA was identified in 5.5% of sputum of 118 patients hospitalized with acute exacerbation of COPD with concomitant pneumonia (Intern. Med. J. 2005;35:661-7). In the current study, 23% of cultures were positive for PA.

Dr. Garcia Vidal, of the Hospital de Bellvitge in Barcelona, and her associates prospectively studied 188 consecutive patients admitted to a 450-bed university hospital between June 2003 and September 2004 with an acute exacerbation of COPD, excluding patients with asthma or bronchitis as their primary diagnosis.

Sputum cultures were taken at admission. Patients were followed for 1 year, and spirometry was performed 1 month after discharge.

Among those patients, 32 (17%) had a hospital admission in the previous month; 116 (62%) had taken antimicrobials in the previous 3 months; and 106 (56%) had bronchiectasis. Their mean age was 72 years, and 95% were male.

A total of 106 patients were readmitted for another episode of acute exacerbation. A valid sputum culture was collected in 220 of 469 episodes. One microorganism was present in 117 episodes, two microorganisms in 93, and three in 10 episodes.

P. aeruginosa was present in 51 (23%) cultures, *Haemophilus influenzae* in 24 (11%), *Streptococcus pneumoniae* in 21 (9.5%), Enterobacteriaceae in 8 (4%), and normal flora in 159 (72%). Patients with bacterial infection had a forced expiratory volume in 1 second (FEV_1) significantly lower than those with negative sputum cultures, she said.

The presence of *P. aeruginosa* in patients was associated with a significantly lower FEV_1 (37.9 vs. 42.7), significantly worse 6-minute walking test (207 meters vs. 324 meters), and significantly greater oxygen use at home (44% vs. 22%).

History of pack-years of smoking was significantly higher in PA patients than in non-PA patients (80.2 vs. 56.2).

P. aeruginosa was resistant to ciprofloxacin in only three patients. "The majority of *P. aeruginosa* isolates remain susceptible to fluoroquinolones, and these drugs should be considered in the empirical treatment of COPD exacerbations in patients admitted to the hospital with a history of previous smoking and severe functional impairment," said Dr. Garcia Vidal. ■

Potent Vancomycin-Resistant Enterococci Hit Germany

NICE, FRANCE — Much like their American counterparts, European clinicians are now struggling with vancomycin-resistant *Enterococci*.

The number of vancomycin-resistant *Enterococci* has increased dramatically from 1.5% in 2001 to 25% in 2005 in some areas of southwestern Germany. "This is a problem on the rise," Dr. Christian Theilacker said at the 16th European Congress on Clinical Microbiology and Infectious Diseases.

During a prolonged outbreak that started in 2004, a total of 167 adult patients in a German tertiary care hospital were found to be colonized and/or infected with vancomycin-resistant *Enterococci* (VRE).

What was disconcerting was that 50% of patients (12/24) died within 4 weeks of infection, despite the use of newer antimicrobial agents.

Invasive infection developed in 24 patients, Dr. Theilacker of University Hospital in Freiburg, Germany, and colleagues reported in a poster.

All VRE isolates were identified as *E. faecium*, and all infections were hospital acquired.

The infection was largely confined to high-risk patients, particularly those with uncontrolled cancer, according to a review of patient records.

Of the 21 cancer patients, 18 (86%) were not in remission; 9 (43%) had recently undergone allogeneic hematopoietic stem cell transplantation, and 14 (67%) had neutropenia at the time of the infection.

Other risk factors for infection were: comorbidities such as neoplasia, liver cirrhosis, and solid-organ transplantation; coinfections (present in 50% of patients); heavy pretreatment with antibiotics prior to infection; and lengthy hospitalization (median 28 days).

The findings confirmed what has been documented in U.S. studies conducted before the availability of newer antimicrobial agents with activity against VRE, Dr. Theilacker said in an interview.

What was disconcerting was that 50% of patients (12/24) died within 4 weeks of infection, despite the use of these newer antimicrobial agents. Four deaths (17%) were thought to be directly attributed to VRE infection by clinical judgment.

In addition, 17% of isolates were found to be resistant to linezolid, an antibiotic that has been found to be active against many drug-resistant strains of bacteria.

The isolates retained full susceptibility to quinupristin/dalfopristin, chloramphenicol, and doxycycline, suggesting that clinicians may want to consider using older agents such as doxycycline in these patients, Dr. Theilacker said. ■

Toscana Virus Identified in Southern France Sandflies

NICE, FRANCE — The Toscana virus has been identified for the first time in sandflies from southern France. Toscana virus infection is now epidemic in Italy, and is an emerging cause of meningitis and encephalitis in Spain and France.

Toscana virus is a ribonucleic acid envelope virus from the family *Bunyaviridae* and genus *Phlebovirus*. Illnesses caused by Toscana virus typically mimic a flu-like syndrome with fever, headache, stiff neck, and photophobia, but can involve the central nervous system, Dr. Philippe Parola said at the 16th European Congress of Clinical Microbiology and Infectious Diseases.

The first case of Toscana infection acquired in France was reported in 1997 in a German traveler, followed by serological evidence in blood donors in 2002-2003, and two acute cases—meningitis and febrile illness—in 2004.

In an effort to identify potential vectors in France, Dr. Parola and associates trapped sandflies near dog kennels and horse stables surrounding Marseille and Nice over 7 days during the summer of 2005. Three pools from Marseille were positive, containing a virus closely related to two genotypes isolated in Italy. Male flies were positive, suggesting that they may act as reservoirs of the virus since males don't bite, said Dr. Parola, of the Faculty of Medicine, Hôpital Nord, Marseille, France. *Sergentomyia minuta* sandflies were shown for the first time to be infected with Toscana virus. This species readily bites reptiles, but its affinity to bite humans is poorly understood.

Two pools in Marseille and one in Nice were found to be positive for *Phlebovirus* generic primers, but negative for Toscana-specific primers.

Sequence analysis showed a high genetic diversity with recognized phleboviruses, suggesting that this virus could represent a new species within the *Phlebovirus* genus. The virus was provisionally named the Massilia virus, Dr. Parola said. ■

Self-Collected Swabs, Urine Samples May Boost Rates of STD Detection

NICE, FRANCE — Self-collected vaginal swabs and urine samples provide clinicians with an opportunity to identify chlamydia and gonorrhea infections that would otherwise go undetected, Dr. Christian Hoebe said at the 16th European Congress of Clinical Microbiology and Infectious Diseases.

That conclusion emerged from a cross-sectional survey that showed the two tests were feasible and highly accepted among 413 women, aged 16-35 years, attending a public STD clinic.

The women reported in a questionnaire that the self-collected vaginal swabs and first-catch urine tests had clear instructions (97% and 93%); were easy to perform (95% and 92%); and were a "pleasant" method (98% and 99%).

More than three-quarters (77%) of the women preferred the self-administered tests over a traditional gynecologic STD exam.

The refusal rate was 1.5% for self-collected vaginal swab specimens and 0% for urine samples.

Analysis of the samples with an amplified DNA assay (the BD ProbeTec ET System, from BD Diagnostics in Sparks, Md.) detected *Chlamydia trachomatis* in 45 of 413 of patients (11%) and *Neisseria gonorrhoeae* in 6 of 413 (1.5%).

Chlamydia was detected in 8 of 43 patients (19%) with a prior STD and in 39 of 312 16- to 25-year-old women (13%).

Overall, 68% of the women had never undergone STD testing before, and 11% of these tested positive (Sex Transm. Dis. 2006 Mar 16;[Epub ahead of print]).

The patients' mean age was 23 years; 56% had engaged in prior risky behaviors; 17% had a risky partner; and 29% were fearful of STDs.

Reasons for taking the tests were: anonymity/privacy (68%), easy access (61%), and not having to undergo an intimate vaginal exam (12%), said Dr. Hoebe of the South Limburg Public Health Service, Heerlen, the Netherlands.

The percent agreement of the tests was 98.8% for chlamydia and 99.3% for gonorrhea, he said. ■