

CRP Test May Help Curb Use of Antibiotics

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RIO GRANDE, PUERTO RICO — Antibiotics were used less frequently on day 1 and during 28 days of follow-up among patients who underwent C-reactive protein tests to determine the presence of bacterial infections, data from a study of adults with respiratory tract infections suggest.

Previous research has shown that a C-reactive protein (CRP) test performed in the primary care setting can decrease diagnostic uncertainty about respiratory tract infections, said Dr. Rogier Hopstaken of Maastricht (the Netherlands) University.

The CRP test can confirm the presence—but not the specific site—of inflammation, he noted.

To determine the effects of a CRP test (in addition to a standard history and physical exam) on antibiotic prescribing

The results of this study suggest that use of the test may help physicians and patients feel more comfortable about delaying antibiotics for lower respiratory tract infections.

rates in primary care, Dr. Hopstaken and his colleagues reviewed data about 258 adult patients with lower respiratory tract infections (LRTIs) who were recruited by 31 family physicians in the Netherlands between November 2007 and April 2008.

The patients were randomized to receive a standard diagnostic workup for LRTIs or the standard workup plus a CRP test. Patients who needed immediate hospitalization or who had taken antibiotics in the previous 2 weeks were excluded from the study.

The patients in the intervention group were categorized based on their CRP levels. Physicians were advised not to prescribe antibiotics if CRP levels were less than 20 mg/L, to delay antibiotics if CRP levels were between 20 mg/L and 99 mg/L, and to prescribe antibiotics immediately if CRP levels were greater than 100 mg/L, Dr. Hopstaken explained at the annual meeting of the North American Primary Care Research Group.

Overall, antibiotic use was significantly reduced in the CRP group, compared with the control group: 43% of the patients in the CRP group filled their prescriptions on day 1, compared with 57% of patients in the control group. The difference in antibiotic use remained significant after 28 days, when 53% of the CRP group had filled prescriptions, compared with 65% of the control group, Dr. Hopstaken reported.

In an analysis of secondary outcomes, patient-reported recovery times and re-consultation rates were about the same in both of the study groups, Dr. Hopstaken said.

On further analysis, patients in the intervention group who had CRP levels less than 20 mg/L had a 50% reduction in antibiotic use, compared with the control group. But 25% of the patients in the intervention group who had CRP levels less than 20 mg/L received antibiotics even though they were in the group for which antibiotics were not recommended.

“The CRP is just a guideline,” Dr. Hopstaken emphasized, noting that the

final decision about whether to prescribe antibiotics rests with the physician.

However, the CRP test “helps target the delayed prescription strategy to the right patients,” Dr. Hopstaken said. Based on these findings, “it is safe to say that CRP-guided prescribing reduced antibiotic use on day 1 and day 28.”

The percentage of patients who said that they were satisfied with their care was significantly higher in the CRP

group than in the control group (78% vs. 65%, respectively).

The CRP test is not widely used as a diagnostic aid in the United States, but the results of this study suggest that use of the test may help physicians and patients feel more comfortable about delaying antibiotics for lower respiratory tract infections, Dr. Hopstaken said.

Dr. Hopstaken had no financial conflicts to disclose. ■



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