



VAP™ Test Case History

Conclusion

Drs. Corpus and Sheth agree that as more physicians become aware of the NCEP ATP III guidelines, use of the VAP Test will increase. "I have adopted everything that the NCEP recommends," Dr. Corpus said. "I tell patients that these are not my recommendations, but those of the National Cholesterol Education Program. This is the standard we have to follow. Eventually, I think the VAP Test will replace the routine

cholesterol test because once physicians get used to looking at the comprehensive detail provided by the VAP Test, they won't be satisfied with the limited information available with the routine test. Bruce Begley is just one high-profile example, but I am sure that we have already made an impact on the health of many people by making this test available." ■



Primilina A. Corpus, M.D.

Dr. Primilina Corpus is medical director of pathology and laboratory services at Methodist Hospital, and medical director of laboratory services at Union County Methodist Hospital. Dr. Corpus received her medical degree at the University of Santo Tomas in Manila, Philippines, and completed her postgraduate training at St. Peter's Hospital in Albany, New York.



Mohit K. Sheth, M.D., F.A.C.C.

Dr. Mohit Sheth is a cardiologist at The Heart Group in Henderson, Kentucky, and medical director of the cardiac catheterization lab at Methodist Hospital. Dr. Sheth has practiced cardiology in Kentucky and Indiana for more than 25 years. He completed his undergraduate and graduate medical education at M.S. University in Baroda, India, and his postgraduate training in Michigan and Illinois.



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Methodist Hospital Laboratory Adopts the VAP Cholesterol Test—with Surprising Results

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– Dr. Primilina Corpus

Methodist Hospital is a 209-bed not-for-profit medical center serving Henderson, Webster, and Union counties in western Kentucky. The hospital provides a range of general medical and surgical services, including cardiopulmonary services and cardiac catheterization. It also features a busy, full-service medical laboratory that performs more than 1 million tests each year for Methodist Hospital and Union County Methodist Hospital, a sister facility to the south.

In early 2003, Primilina A. Corpus, M.D., medical director, pathology and laboratory services, spearheaded the successful integration of a new cholesterol test technology—the VAP™ (Vertical Auto Profile) Cholesterol Test—at Methodist Hospital. In conjunction with the debut of the VAP Test, the hospital began an ongoing education and marketing program to ensure that local physicians and patients were aware that this important new test was available. In the year since the hospital began offering the VAP Test, local physicians have identified a number of people at risk for heart disease and helped them on the road to health through lifestyle changes and medications. The biggest surprise was the hospital's executive director, Bruce Begley, whose troubling VAP Test results led to treatment and lifestyle changes that Dr. Corpus believes have been instrumental in saving his life.

"Standing Room Only" at VAP Test CME Meeting

After reading about the VAP Test in medical journals and hearing it discussed at professional meetings, Dr. Corpus was intrigued about the potential benefits of the expanded cholesterol test. Further research led her to Birmingham, Alabama-based Atherotech, developer of the VAP Cholesterol Test, which helped set up a continuing medical education (CME) program so that local physicians could learn more about the test. That initial meeting attracted a standing-room-only crowd of physicians eager to learn more about the VAP Test and to better understand how it improves the early identification and treatment of patients at risk for heart disease.

For many years, the medical community has relied on the routine cholesterol test as a key indicator of heart disease risk. The routine test measures total cholesterol, high-density lipoprotein (HDL), and triglycerides, and calculates—rather than directly measures—low-density lipoprotein (LDL). The VAP Test, in contrast, provides a more accurate, direct measurement of LDL. It also measures important lipoprotein subclasses, including VLDL (very low-density lipoprotein), lipoprotein(a) [Lp(a)], HDL subtypes (HDL₂ and HDL₃), and IDL (intermediate-density lipoprotein).

Clinical research has led to a greater understanding about the role of these lipid subfractions in the development of heart disease, and measurement using an expanded cholesterol tests now allows for more targeted patient therapy. For example, elevated Lp(a), also known as the "widow maker," is an independent clinical risk factor for heart disease and stroke, increasing the risk of

premature heart disease by up to 70 percent. Patients with high Lp(a) benefit from treatment with niacin in combination with statins.

The VAP Test also measures LDL pattern density—critical because patients with small, dense LDL (Pattern B) have a four-fold increased risk of developing heart disease. This comprehensive information allows the VAP Test to identify up to 90 percent of at-risk patients, versus just 40 percent with the routine test. Measurement of other known risk factors, including homocysteine and high-sensitivity C-Reactive Protein (hs-CRP), also can be obtained as an adjunct to the VAP Test.

The VAP Test also allows physicians to maximize compliance with the current National Cholesterol Education Program Adult Treatment Panel III (NCEP ATP III) guidelines, which call for improved patient diagnosis and more aggressive treatment of heart disease. These guidelines indicate that many patients who would benefit from treatment are not receiving it, and discuss emerging risk factors and secondary targets of therapy that are not measured by routine lipid panels—but are measured by the VAP Test. They also address the importance of a more accurate, direct measurement of LDL, versus the calculation provided by routine tests.

According to Dr. Corpus, a growing body of scientific evidence reinforces the need for expanded cholesterol testing to improve the early diagnosis and treatment of heart disease. “The VAP Test gives us much more information than the routine test and helps us identify those patients who are unknowingly at very high risk,” Dr. Corpus said. “It also allows us to be more aggressive and directs us to proper treatment options.”

The VAP Test at Methodist Hospital

Dr. Corpus said that the VAP Test is easy to incorporate into practice and simple to use. The VAP Test involves

a simple blood draw that is performed by lab technicians at Methodist Hospital. Samples are sent to Atherotech’s Clinical Laboratory Improvement Act-approved lab in Birmingham for processing, and results are returned to Methodist via fax within 72 hours. Technology advances at Atherotech also allow test results to be delivered electronically via e-mail or data download.

Dr. Corpus said the results, which are detailed on the comprehensive VAP Test Patient Profile, allow physicians to quickly identify lipid abnormalities that would otherwise go undetected. “The profile has a tremendous amount of information, but is easy to read and interpret,” she said. “It indicates desirable ranges and highlights atypical values. Physicians can scan the report and immediately identify any abnormal measurements.”

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According to Dr. Corpus, the hospital’s initial VAP Test CME meeting proved fortuitous: When she asked those in attendance to volunteer to take the test, Executive Director Bruce Begley was among those who offered their arms for blood draws. After the meeting, Begley went about his day, thinking no further about the test until he received an urgent phone call from Dr. Corpus a few days later. “I happened to look at his results, and every box was checked, indicating abnormal values,” Dr. Corpus said. “I made an immediate appointment with him and urged him to visit a cardiologist as soon as possible.”

That call started a chain of events that transformed Begley’s life and made him a true believer in the VAP

Test. His cardiologist, Mohit K. Sheth, M.D., scheduled an immediate cardiac workup that included a cardiac catheterization to identify blockages in his coronary arteries. Tests revealed that Begley had significant blockage in two arteries—one was 80 percent blocked and another was 50 percent blocked. A coronary angioplasty and placement of a stent, done at another facility, successfully opened the blocked arteries, while a combination of medications and lifestyle changes, including an exercise program and better diet, have put Begley on the road to weight loss and improved heart health. Subsequent VAP Tests have indicated improvement in a number of his cholesterol parameters.

Dr. Sheth said he is confident that continued treatment and monitoring with the VAP Test will significantly reduce Begley’s chances of having a heart attack. “Additional information is always helpful, both to identify patients at risk and to guide treatment,” he said.

VAP Test Guides Treatment

In order to help physicians understand the role of the VAP Test in guiding treatment, Dr. Corpus provides physicians with a copy of a comprehensive treatment monograph created by Paul Ziajka, M.D., Ph.D., a Florida-based lipid expert and one of the foremost authorities on the VAP Test. The module provides algorithms to guide physicians in the appropriate treatment, which might include statin monotherapy or combination therapy pairing statins with niacin, fibrates, and/or other medications, as well as diet modifications and lifestyle changes designed to improve cholesterol levels and lower heart disease risk. (To obtain a copy of Dr. Ziajka’s treatment monograph, visit www.thevaptest.com, or call 800-719-9807.)

Embracing the VAP Test

Now, as true believers in the VAP Test, Begley and Dr. Corpus have instituted a program that allows the hospital’s employees to take a VAP Test at a substantially

reduced out-of-pocket cost. The program was launched at an employee health fair, and many of the hospital’s 1,200 employees already have taken advantage of the opportunity to receive a VAP Test. Dr. Corpus has volunteered to review patient results—a task that is keeping her busy, but has proved rewarding. If any abnormalities are uncovered, she refers employees to their physicians, providing a copy of the VAP Test Patient Profile as well as Dr. Ziajka’s treatment monograph.

“Patients appreciate having their VAP Test results explained to them, and I think the test helps improve compliance with treatment,” Dr. Corpus said. “If I explain to patients what ‘LDL Pattern B’ means and tell them this condition is four times more atherogenic, they take their treatment more seriously. It is working very well, and I think we are changing lifestyles for the better. Now, I run into employees in the hallway, and they say, ‘I have my anti-smoking patch on,’ or ‘I’m exercising.’ If I just tell them their cholesterol is elevated, it doesn’t have the same impact.”

The hospital also has embarked on an advertising and public relations campaign to let people in the community know that the VAP Test is available. And, it is planning additional CME activities in order to further physician education about the test. Dr. Corpus also is helping to educate physicians about what the VAP Test results mean and the appropriate treatments for various cholesterol abnormalities uncovered by the test. Seeing the successful program at Methodist, the chief executive officer of sister facility Union County Methodist Hospital has asked Dr. Corpus to speak to the board of directors as an initial step in incorporating the VAP Test at Union County.