Clinicians Remain Reluctant to Allow Negative Findings to Influence Practice

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RESULTS FROM A RECENT REVIEW of randomized controlled trials suggest that medically treating mild hypertension in individuals with no previous cardiovascular events or cardiovascular disease does not reduce mortality or morbidity. But, as so often happens with negative findings, it remains to be seen whether this evidence will change clinical practice.

The review, by the Cochrane Collaboration, is at odds with current guidelines in the United States and Europe that call for medical therapy if lifestyle changes cannot control an individual’s blood pressure. The Cochrane conclusion follows recent actions by the US Preventive Services Task Force (USPSTF), which has questioned whether screening men for prostate cancer, screening women younger than 50 years for breast cancer, and using electrocardiography to predict coronary heart disease events in low-risk asymptomatic adults provide sufficient potential benefits to offset potential harms. In turn, the Cochrane findings and the USPSTF recommendations have met resistance from the professional societies that have published guidelines promoting these practices and the scientists whose research underlies such guidance.

Sharon Straus, MD, MSc, who researches knowledge translation, is not surprised by such resistance. “We do have to be aware that sometimes evidence changes over time, and we need to be open to that change. But that is hard to do,” she said.

Straus, of the University of Toronto, Toronto, Canada, said it is particu-
treat mild hypertension medically. “A population at low risk followed for 5 years may not allow a demonstration of benefit,” said Schiffrin. “And for that reason, people have gone on to use epidemiological evidence. And you come to a moment when you consider the risk of hypertension is increased to a degree that, even though you cannot prove it in a clinical trial, a medical intervention will produce a benefit.”

Wright is not as trusting of epidemiological evidence. “I have a high blood pressure clinic, and I’ve already changed my practice,” Wright said. “When I see someone with mild hypertension, I inform them of what the evidence shows, and some will say, ‘That’s fine, then I don’t want to take something that’s not proven.’ Others I see may already be on the drugs and doing well, and they continue on them.”

BARRIERS TO CHANGE

Ethan Basch, MD, MSc, a member of the methodology committee of the Patient-Centered Outcomes Research Institute, said incorporating new findings into clinical practice is always difficult. He noted several barriers, including the tendency for physicians to become entrenched in a way of practicing medicine and skeptical of new evidence; improper dissemination of new findings, which fail to reach the decision tools physicians use; confusion that emerges over ambiguous study results, which prompts physicians to fall back on past practices; and information overload, which makes it difficult to keep up with nuanced changes.

Even with these barriers, Basch believes new information can ultimately be melded into practice. “I think we as scientists become invested in the direction of our own research and become blinded to the evidence that contradicts what we are doing,” said Basch, who is also director of cancer outcomes research at the University of North Carolina in Chapel Hill. “But I also think when the science becomes compelling enough, scientists will be swayed.”

Blood Type Linked to Heart Disease Risk, But Clinical Significance Unlikely

Corresponding author Lu Qu, MD, PhD, of Harvard Medical School in Boston, said his team’s analysis confirmed an association between blood groups and heart disease risk found in earlier but smaller epidemiological studies (mostly comparing type O individuals against non–type O individuals).

Qu said that once additional research confirms his team’s results, future studies should focus on identifying the mechanisms that cause these differences in risk.

“Compared with established risk factors like smoking and high levels of LDL-C [low-density lipoprotein cholesterol], ABO blood type identifies relatively moderate risk,” Qu said. “But our study adds new information and opens the door for further mechanism research, because blood type is from birth and not modifiable.”

The mechanisms for this association remain unclear. Earlier studies have shown that plasma levels of factor VIII–von Willebrand factor (vWF) complex are about 25% higher in individuals with blood types other than type O. Factor VIII-vWF, along with fibrinogen, aids in platelet aggregation, which plays a role in atherosclerosis development. In addition, type A blood has been associated with increased levels of LDL-C and total cholesterol. Type AB has been associated with increased inflammation.

But while future research may uncover some explanation for the link, the clinical implications for today appear to be almost nil. Most US patients are assessed for heart disease risk using the Framingham risk calculation, which creates a