Hypertension Headlines in 2020

What will the top mechanical therapy for hypertension stories coming out of major meetings in 2020 read? *Endovascular Today* sought prognostication from hypertension experts about therapeutic options in the coming years.

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Disclosures: Institutional research grants (to Columbia University) from Medtronic, Inc., Boston Scientific Corporation, Abiomed, Vascular Dynamics, Abbott Vascular, and Eli Lilly

2020 Headline

"NEW DEVICE CAN REPLACE MEDICAL THERAPY FOR SOME HYPERTENSIVE PATIENTS"

I believe that in 2020, there will be a headline announcing the success of a device-based interventional therapy for the treatment of patients with hypertension as an alternative to medical therapy. I could be wrong, but I do think that we will have a therapy that can downregulate blood pressure safely. In selected patients deemed to be good candidate responders, that therapy could be used as an adjunct to medications or in lieu of one or more medications.

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2020 Headline

"HYPERTENSIVE PATIENTS ARE NOT TAKING THEIR MEDICATIONS: NEW DEVICE THERAPIES BECOME FIRST-LINE TREATMENT"

In 2020, we won't be debating whether device therapies work for hypertension. Our focus will be on comparing and contrasting various forms of device-based therapies. For example, should all patients with medically refractory hypertension be treated initially with a noninvasive device-based therapy (such as Kona, Kona Medical), and then be advanced to more invasive methods (such as Vessix, Boston Scientific Corporation) if blood pressure remains elevated? Hopefully, we will realize in 2020 that these patients do not and will not take their four, five, or six prescribed antihypertensive medications, whether they are in a hypertension center of excellence or in the local family doctor's office! Device therapy will be the first choice for some patients!

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2020 Headline

"MECHANICAL THERAPIES FOR HYPERTENSION: A REALISTIC TREATMENT OPTION"

After careful exclusion of secondary forms of hypertension, combined hemodynamic and autonomic profiling of patients with hypertension will enable clinicians to select optimized device therapy of hypertension with the potential for a "cure" and freedom from pharmacotherapy. These mechanical therapies no longer need to be restricted to only those patients with resistant hypertension. First, this will obviate the need for medication adherence assessment, as no strategy has been proven to improve long-term compliance. Second, this will help patients with multiple medication intolerance who cannot take antihypertensive drug therapy.

Younger individuals with a high sympathetic drive may respond well to renal denervation. Where there is evidence of enhanced drive from the peripheral chemoceptor, (endovascular) carotid body ablation may be appropriate. Patients with noncompliant circulation and aortic stiffness will benefit most from the Rox arteriovenous coupler (Rox Medical). Resistant hypertension not amenable to these therapies is likely to respond to baroreflex activation therapy, which is costly but effective.

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Disclosures: Steering committees for RDN trials: Medtronic, Inc., Boston Scientific Corporation

2020 Headline

"SYMPATHETIC DENERVATION REMAINS AN INTEGRAL PART OF INTERVENTIONAL PRACTICE"

It has become an assumption that this technology is dead because of the outcomes of one trial. To the contrary, many important practice tools, such as drug-eluting stents in the coronary arteries and in the periphery, were met with failed trials in the first studies. The fact that sympathetic denervation is such an integral part of so many pathologic processes—from hypertension to heart failure, atrial fibrillation, and others—indicates to me that this is an extremely important area of study. Over the time period we are speculating on, I believe improved technology and methods of treatment will be an important part of the interventionist's practice, which may include the treatment of many patients with a variety of diseases, some of which we may not be treating today. As a result, this is a field in which leading interventionists should remain involved as we learn about and define these applications.

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Disclosures: Consultant for Cordis, ReCor, and Boston Scientific Corporation and receives research grants from Boston Scientific Corporation, St. Jude Medical, and Medtronic, Inc.

2020 Headline

"RENAL DENERVATION PROVES EFFICIENT IN REDUCING MEDICATION NEEDS IN RECENTLY DISCOVERED FORM OF ESSENTIAL HYPERTENSION"

Renal denervation has been shown efficient for the first time in the French randomized trial, DENER-HTN (presented at ESH 2014 in Athens, Greece), which examined the effectiveness and costs of the Symplicity catheter (Medtronic, Inc.) with stepped care–optimized antihypertensive treatment compared to stepped care–optimized antihypertensive treatment alone. In this trial, a significant reduction of 6 mm Hg in daytime systolic ABPM was observed in the denervation group compared to the medical treatment group. With the help of more efficient technology, the effect will be more profound and more reliable. If one considers the difficulty for patients to take medication over the span of several years and the subsequent poor compliance with medical treatment, it is very possible that using denervation as an adjunct to medication at an earlier stage of hypertension treatment will demonstrate its clinical and medico-economic efficiency in the future.

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Disclosures: Study honoraria, travel expenses, and consulting fees from Abbott, Access Closure, AGA, Angiomed, Aptus, Atrium, Avinger, Bard, Biosense Webster, Boston Scientific, Bridgepoint, Carag, Cardiac Dimensions, CardioKinetix, CardioMEMS, Cardiox, Celonova, CGuard, Coherex, Contego, Covidien, CSI, CVRx, EndoCross, ev3, FlowCardia, Gardia, Gore, GTIMD Medical, Guided Delivery Systems, Hemoteq, InSeal Medical, InspireMD, Lumen Biomedical, HLT, Lifetech, Lutonix, Maya Medical, Medtronic, NDC, Occlutech, Osprey, Ostial, PendraCare, pfm Medical, Recor, ResMed, Rox Medical, SentreHeart, Spectranetics, SquareOne, Svelte Medical Systems, Tendyne, Trireme, Trivascular, Valtech, Vascular Dynamics, Venus Medical, Veryan, and Vessix; grant research support from Cook and St. Jude Medical; stock options with Cardiokinetix, Access Closure, Velocimed, Lumen Biomedical, Coherex, and SMT

2020 Headline

"CHINESE RANDOMIZED TRIAL SHOWS SUPERIORITY OF NONINVASIVE RENAL DENERVATION"

Why? By 2020 or 2025, a large part of innovation and clinical research will move to Asia. More and more, invasive therapies will be replaced by noninvasive therapies. ■