Publications Validate Clinical Safety and Efficacy of Shockwave Intravascular Lithotripsy

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Simultaneous Publication of Three Studies in the Journal of the American College of Cardiology: Cardiovascular Interventions

SANTA CLARA, Calif., June 28, 2021 (GLOBE NEWSWIRE) -- Shockwave Medical, Inc. (NASDAQ: SWAV), a pioneer in the development of Intravascular Lithotripsy (IVL) to treat severely calcified cardiovascular disease, announced today that the safety, efficacy and mechanism of benefit of IVL for the treatment of coronary and peripheral artery disease has been further elucidated with the publication of three separate manuscripts in the June 28, 2021 issue of the *Journal of the American College of Cardiology: Cardiovascular Interventions (JACC CI)*, comprising a pooled analysis of four studies involving coronary IVL, a randomized clinical trial involving peripheral IVL and a Mechanism of Action paper. A summary of each published article is outlined below.

The patient-level pooled analysis of the four prospective Disrupt CAD studies (Disrupt CAD I, II, III, and IV) analyzed the clinical outcomes of coronary IVL in severely calcified, stenotic *de novo* coronary arteries prior to stenting. The analysis reports the largest cohort of patients (628) treated with coronary IVL to date. The key findings include:

- Coronary IVL safely facilitated successful stent implantation and achieved high procedural success in one of the most severely calcified vessel cohorts reported for any PCI trial to date.
- Primary safety and effectiveness endpoints were achieved in almost all patients (92.7% and 92.4% respectively).
- Coronary IVL showed low rates of major adverse cardiovascular events (MACE) and very low rates of severe angiographic complications in complex target lesions.
- Coronary IVL was consistently effective in achieving high acute gain and low residual stenosis.

As noted in the accompanying editorial, the key limitation is that the studies do not include a head-to-head control group. The Disrupt CAD studies were designed to obtain regulatory approval for Shockwave C^2 Coronary IVL device in the European Union, United States and Japan.

Disrupt PAD III is the largest-ever randomized controlled trial (RCT) assessing the treatment of calcified lower extremity arterial lesions. It compares vessel preparation with peripheral IVL to percutaneous transluminal angioplasty (PTA) in patients receiving drug-coated balloon (DCB) treatment for peripheral arterial disease (PAD). Below are the key findings:

- Peripheral IVL was superior to PTA in the primary endpoint, procedural success, at 30-days. (Site reported: 90.1% vs 64.5%; p<0.0001, Core lab reported: 65.8% vs. 50.4%; p=0.01)
- Vessel preparation was safely performed with IVL using a significantly lower maximum balloon inflation pressure relative to PTA and a lower rate of provisional or so-called bail-out stenting.
- There was no distal embolization or perforation in the IVL group.
- Final residual stenosis following the definitive therapy, DCB and/or stent placement, was similar between the two groups, although the PTA group required more stents (p=0.001).

The study authors conclude that IVL treatment required significantly less bail-out stenting to achieve a successful outcome, thereby facilitating a "leave-nothing-behind" approach in patients with severely calcified lower extremity arterial lesions. As was noted in the accompanying editorial, the objective of the study was to determine if IVL was able to prepare the vessel with a low residual stenosis and without severe dissections or the need for stents versus more narrowly focusing on only the residual stenosis at the end of the procedure.

The IVL Mechanism of Action state-of-the-art review presents principles of lithotripsy therapy including the IVL system, procedure, energy distribution, and specific mechanisms for calcium modification. Key findings include:

- IVL fractures both superficial and deep calcium and minimizes the risk of vascular complications or thermal injury.
- In the treatment of severely calcified lesions, IVL offers several advantages compared to balloon-based and athero-ablative (atherectomy) technologies.
- IVL has very high levels of safety and effectiveness across multiple clinical studies involving severely calcified coronary and peripheral artery disease.

"It is a tremendous accomplishment to have three separate publications in such a well-respected journal like *JACC CI*," said Dean Kereiakes, M.D., FACC, FSCAI, President of The Christ Hospital Heart and Vascular Institute, Professor of Clinical Medicine, The Ohio State University and Principal Investigator for Disrupt CAD III. "These publications represent the most definitive evidence to date for safety and effectiveness of IVL as adjunctive therapy in vascular intervention. In addition, specific mechanisms of benefit from IVL are clearly defined. IVL represents a quantum step forward in our ability to safely treat patients with severely calcified arteries."

As coronary artery disease progresses, plaque in the arterial wall develops calcium deposits, which narrow the artery and restrict blood flow. When lesions are not calcified, a balloon (angioplasty) can aid in the placement of a stent. However, when the plaque hardens, the artery is more difficult to open and more aggressive approaches are needed. IVL uses sonic pressure waves, also known as shockwaves, that harmlessly pass through soft arterial tissue and preferentially disrupt calcified plaque by creating a series of micro-fractures. After the calcium has been cracked, the artery can be expanded by low pressure balloon inflation and a stent can be safely implanted to improve blood flow, with minimal trauma to normal arterial tissue. IVL received FDA approval for use in coronary arteries in February 2021 and has been cleared for the treatment of peripheral arterial disease in the

United States since 2016.

About Shockwave Medical, Inc.
Shockwave is focused on developing and commercializing products intended to transform the way calcified cardiovascular disease is treated. Shockwave aims to establish a new standard of care for the interventional treatment of atherosclerotic cardiovascular disease through differentiated and proprietary local delivery of sonic pressure waves for the treatment of calcified plaque, which the company refers to as Intravascular Lithotripsy (IVL). IVL is a minimally invasive, easy-to-use and safe way to significantly improve patient outcomes. To view an animation of the IVL procedure and for more information, visit www.shockwavemedical.com.

Forward-Looking Statements

This press release contains statements relating to our expectations, projections, beliefs, and prospects, which are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases, you can identify these statements by forward-looking words such as "may," "might," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential" or "continue," and similar expressions, and the negative of these terms. You are cautioned not to place undue reliance on these forward-looking statements. Forward-looking statements are only predictions based on our current expectations, estimates, and assumptions, valid only as of the date they are made, and subject to risks and uncertainties, some of which we are not currently aware.

Important factors that could cause our actual results and financial condition to differ materially from those indicated in the forward-looking statements include, among others: the impact of the COVID-19 pandemic on our operations, financial results, and liquidity and capital resources, including the impact on our sales, expenses, supply chain, manufacturing, research and development activities, clinical trials, and employees; our ability to develop, manufacture, obtain and maintain regulatory approvals for, market and sell, our products; our expected future growth, including the size and growth potential of the markets for our products; our ability to obtain coverage and reimbursement for procedures performed using our products; our ability to scale our organizational culture; the impact of the development, regulatory approval, efficacy and commercialization of competing products; the loss of key scientific or management personnel; our ability to develop and maintain our corporate infrastructure, including our internal controls; our financial performance and capital requirements; and our ability to obtain and maintain intellectual property protection for our products, as well as our ability to operate our business without infringing the intellectual property rights of others. These factors, as well as others, are discussed in our filings with the Securities and Exchange Commission (SEC), including in Part I, Item IA - Risk Factors in our most recent Annual Report on Form 10-K filed with the SEC, and in our other periodic and other reports filed with the SEC. Except to the extent required by law, we do not undertake to update any of these forward-looking statements after the date hereof to conform these statements to actual results or revised expectations.

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