



ASX release

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SphygmoCor uncovers positive drug effects in pre-eclampsia patients

AtCor Medical (ASX: ACG), the developer and marketer of the SphygmoCor® system which measures central blood pressures and arterial stiffness noninvasively, today announced that a University of Illinois Medical Center, Chicago study¹ has highlighted an important new inpatient use for SphygmoCor: monitoring the effects of drug therapy in hospitalised patients with pre-eclampsia, a potentially life-threatening complication of pregnancy.

"This new study adds to the growing scientific evidence of the importance of measuring noninvasive central blood pressure in the diagnosis and treatment of pre-eclampsia in hospitalised patients and in clinics, and presents a new application for our technology," said Duncan Ross, AtCor Medical President and CEO. "Using noninvasive central pressure assessment, the investigators were able to measure important drug effects that were not detectable with standard brachial cuff blood pressure measurements."

The study found that in women with pre-eclampsia, intravenous treatment with magnesium sulfate (primarily administered to prevent seizures) significantly decreased central pressure and arterial stiffness. The investigators measured central pressure and arterial augmentation index (an indicator of arterial stiffness) with SphygmoCor at four points: before the drug was administered, one hour after a bolus injection was given, four hours after maintenance intravenous infusion was given and 24 hours after delivery and the cessation of drug therapy. The study found that central arterial pressure and arterial stiffness decreased significantly after the drug was administered; with the greatest decrease occurring four hours after maintenance drug therapy was initiated. Twenty-four hours after delivery and the cessation of drug therapy, arterial pressure had risen slightly but arterial stiffness remained at the same level.

The study was presented at the 2010 Maternal and Fetal Medicine Society Annual Meeting, where Dr. Dennie Rogers, the study's lead author, was named to receive the Norman Gant Award for Maternal Medicine, the award recognising the best scientific work in high-risk pregnancy care.

"Studies published earlier² by a research team at the University of London showed that elevated central blood pressure predicted 88% of cases of early onset preeclampsia", Ross continued. "The same team also published a study³ showing that the effects of alpha methyl dopa in lowering central blood pressures and arterial stiffness in pre-eclamptic women could only be measured with noninvasive central blood pressure assessment."

"These important studies in preeclampsia provide further evidence of the vital need to measure central blood pressure, both in patient care and in clinical trials, Ross said. "It is the only way to fully evaluate and manage the cardiovascular risks and benefits of drug therapy."

¹ Effects of Magnesium on Central Compliance in Preeclampsia Rogers D, Hibbard JU
Abstract Society of Maternal-Fetal Medicine 2010 Annual Meeting

² Khalil A, Copper D, Harrington K. Pulse wave analysis, a preliminary study of a novel technique for the prediction of pre-eclampsia. BJOG 2009; 116:268-277

³ Khalil A, Jaumiaux E, Harrington K; Antihypertensive Therapy and Central Hemodynamics in Women with Hypertensive Disorders in Pregnancy; Obstetrics & Gynecology 2009 113:646-652

About AtCor Medical

AtCor Medical develops and markets products for the early detection of cardiovascular risk and management of cardiovascular disease. Its technology allows researchers and clinicians to measure central blood pressure non-invasively. The company's SphygmoCor® system visibly identifies the effects of reflected blood pressure in the central aortic pressure wave, effects which cannot be detected with standard blood pressure monitoring. More than 2,100 SphygmoCor® systems are currently in use worldwide at major medical institutions, research institutions and in various clinical trials with leading pharmaceutical companies. The company's technology has been featured in hundreds of peer-reviewed studies published in leading medical journals. AtCor has operations in Australia, the United States, and Europe. For further information, please visit our web site at **www.atcormedical.com**.

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