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Medications to treat cardiovascular risk factors do not impact erectile function

New study provides reassurance for men taking blood pressure and cholesterol modifying medications, reports the Canadian Journal of Cardiology

Philadelphia, January 29, 2018 – Erectile dysfunction (ED) is a major public health problem. Men being treated for cardiovascular risk factors such as high blood pressure and high cholesterol are at increased risk of developing ED and often consider this condition a side effect of their medications. However, a new study into the effects of cholesterol-lowering statins and blood-pressure lowering candesartan/HCTZ concludes that these medications do not negatively affect erectile function. The [study](#) is published in the [Canadian Journal of Cardiology](#).

“Previous research suggests that cardiovascular risk factors such as high blood pressure and cholesterol increase the risk of ED, but there has been little research examining whether modifying these risk factors can impact its development,” explained lead investigator Philip Joseph, MD, Assistant Professor of Medicine at McMaster University, Hamilton, Ontario, Canada.

Investigators evaluated the consequences of cholesterol lowering with a statin, pharmacologic blood pressure reduction, and a combination of the two, on erectile function. This was a substudy of the Heart Outcomes Prevention Evaluation – 3 (HOPE-3) randomized controlled trial, a 2x2 factorial randomized controlled trial testing candesartan/HCTZ versus placebo, rosuvastatin versus placebo, and the combination of these medications versus double placebo. Erectile function was measured using a questionnaire (the International Index of Erectile Function [IIEF] questionnaire) completed by more than 2,000 men at the beginning of the study and again at a mean follow-up of 5.8 years. The IIEF is a validated, 15-item questionnaire to assess five domains of ED over the previous four-week period.

During the study, none of the treatment groups were associated with a significant change in erectile function when compared to their respective placebo groups. Neither blood pressure lowering with candesartan/HCTZ nor cholesterol lowering with a statin showed an impact on erectile function. Importantly, taking these medications were not associated with the development of ED.

“This study shows that lowering these critically important cardiac risk factors using these medications has little impact on changes in erectile function,” commented Dr. Joseph. “Men who develop ED while on such medications commonly attribute their symptoms to the medications. Our findings suggest that these two medications do not negatively impact erectile function, which should be reassuring to men who are taking them.” This is an important finding, because doctors can reassure patients that their ED is almost certainly not related to these medications, which have been well-shown to prevent major complications of heart disease, and encourage them to continue to take them.

“Patients who express concern about ED should be reassured about the lack of impact with statins or the combination of angiotensin receptor blocker/thiazide,” wrote G.B. John Mancini, MD, FRCPC, FACC, Professor of Cardiology in the Department of Medicine, University of British Columbia, Canada, in an accompanying [editorial](#). “But, perhaps more importantly, they need to be assessed more comprehensively and directed to and/or instructed in the safe use of phosphodiesterase-5 inhibitors when appropriate and when nitrates are not being used. The current study provides strong motivation for cardiologists to develop confidence and competence in the overlap between quality of life as reflected by male sexual health and reduction of cardiovascular risk.”

Erectile dysfunction (ED) affects about 40 percent of men over 50 years old and is more common in men with cardiovascular risk factors.

Notes for editors

The study is “Long-term Effects of Statins, Blood Pressure Lowering, and Both on Erectile Function in Persons at Intermediate Risk for Cardiovascular Disease: A Substudy of the Heart Outcomes Prevention Evaluation-3 (HOPE-3) Randomized Controlled Trial,” by Philip Joseph, MD; Eva Lonn, MD; Jackie Bosch, PhD; Patricio Lopez, MD, PhD; Jun Zhu, MD; Matyas Keltai, MD, PhD; Anthony Dans, MD; Christopher Reid, PhD; Kamlesh Khunti, MD, PhD; William Toff, MD; Leopoldo Piegas, MD, PhD; Jae-Hyung Kim, MD; Balakumar Swaminathan, MSc; Michael Bohm, MD, PhD; and Salim Yusuf, MB, BS, DPhil on behalf of the HOPE-3 Investigators (<http://dx.doi.org/10.1016/j.cjca.2017.09.026>). The editorial is “Cardiovascular Risk Reduction and Male Sexual Health: No Free Ride,” by G.B. John Mancini, MD (<http://dx.doi.org/10.1016/j.cjca.2017.10.022>). They appear in the *Canadian Journal of Cardiology*, volume 34, issue 1 (January 2018) published by Elsevier.

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Full text of these articles is available to credentialed journalists upon request. Contact Eileen Leahy at +1 732-238-3628 or cjcmmedia@elsevier.com to obtain copies. Journalists wishing to schedule interviews with the study authors should contact Veronica McGuire, Coordinator, Media and Community Relations, Faculty of Health Sciences, McMaster University, at +1 905-525-9140 ext. 22169 or vmcguir@mcmaster.ca. G.B. John Mancini may be reached for comment at +1 604-875-5477 or mancini@mail.ubc.ca.

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About the Editor-in-Chief

Editor-in-Chief Stanley Nattel, MD, is Paul-David Chair in Cardiovascular Electrophysiology and Professor of Medicine at the University of Montreal and Director of the Electrophysiology Research Program at the Montreal Heart Institute Research Center.

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The Canadian Cardiovascular Society is the professional association for Canadian cardiovascular clinicians and scientists working to promote cardiovascular health and care through knowledge translation, professional development, and leadership in health policy. The CCS provides programs and services to its 2000+ members and others in the cardiovascular community, including guidelines for cardiovascular care, the annual Canadian Cardiovascular Congress, and, with the Canadian Cardiovascular Society Academy, programs for trainees. More information about the CCS and its activities can be found at www.ccs.ca.

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