

Obesity

Continued from page 1

According to Dr. Tam, the work provides a novel approach to slow the development of renal injury through chronic blockade of peripheral CB1Rs. “And, it also supports strategies aimed at reducing the activity of the endocannabinoid system, specifically in the kidney, to attenuate the development of RPTC dysfunction in obesity.”

Allon Friedman, MD, who was not involved with the work and is a nephrologist and clinical investigator at Indiana University School of Medicine, noted that the intimate connection between rising rates of obesity and chronic kidney disease makes

it likely that this topic will become increasingly prominent in the coming years.

“These intriguing animal studies expand our understanding of how endocannabinoid physiology influences kidney health,” he said. “The next step will be to extend these findings in humans through the testing of endocannabinoid receptor antagonists.” In his 2011 *Kidney News* article, Dr. Friedman pointed to other possible factors, including alterations in levels of adipocyte-related cytokines such as leptin and adiponectin (as well as other hormones) and upregulation of the renin-angiotensin axis and sympathetic nervous system activity. Many unanswered questions remain surrounding both the causes of obesity-related kidney disease and its optimal treatment. ●

Visceral Fat Is Linked to Inflammation in Dialysis Patients, While Subcutaneous Fat Marks Nutritional Status



In dialysis patients, visceral fat is a marker of inflammation while subcutaneous fat is a marker of nutritional status, suggests a study in *American Journal of Kidney Diseases*.

The cross-sectional study included 609 adult hemodialysis patients enrolled in the US Renal Data System’s ACTIVE/ADIPOSE study. Participants underwent several measurements: body mass index (BMI), waist circumference as an indicator of visceral fat, and percentage body fat as an indicator of subcutaneous fat. The two fat measures were evaluated for association with markers of inflammation, nutrition, and adiposity-related hormones.

Body mass index was directly related to the inflammatory markers C-reactive protein and interleukin-6 (IL-6), but not with markers of nutrition, i.e., prealbumin or albumin. BMI was inversely associated with adiponectin and directly related to leptin. In a model including proxies for both visceral and subcutaneous fat, percentage body fat—the indicator for subcutaneous fat—was unrelated to C-reactive protein, but was inversely associated with IL-6.

Also in this model, waist circumference was associated with markers of inflammation but was inversely associated

with prealbumin and albumin. Percentage body fat was directly related to these nutritional markers. Waist circumference was indirectly related to adiponectin and indirectly related to leptin.

Dialysis patients with BMI higher than the normal range generally have a higher survival rate, a phenomenon called the “obesity paradox,” which has confounded researchers and practitioners. Yet BMI is a general marker of adiposity, and does not distinguish between subcutaneous and visceral fat, which may have differing metabolic and inflammatory characteristics. Determining the type of fat—visceral or subcutaneous—may help unravel the obesity paradox, but longitudinal studies are needed to clarify the associations between measures of body fat and markers of inflammation.

Added to previous findings, the results of this cohort study of dialysis patients suggest that “higher subcutaneous fat may account for the observed survival advantage associated with higher BMI.” ●

Delgado C, et al. Associations of body mass index and body fat with markers of inflammation and nutrition among patients receiving hemodialysis. *Am J Kidney Dis* 2017; DOI: <http://dx.doi.org/10.1053/j.ajkd.2017.06.028>.



Kidney News

EDITORIAL STAFF

Editor-in-Chief: Richard Lafayette, MD

Executive Editor: Dawn McCoy

Design: Lisa Cain

Communications Assistant: Sara Leeds

EDITORIAL BOARD

Joseph Mattana, St. Vincent’s Medical Center, Bridgeport, CT

Andrew King, MD, Scripps, San Diego, CA

Pascale Lane, MD, FASN, University of Oklahoma Health Sciences

Edgar V. Lerma, MD, FASN, University of Illinois – Chicago /Associates in Nephrology, SC

Uday S. Nori, MD, Ohio State University Wexner Medical Center

Glenda Payne, MS, RN, CNN, Nephrology Clinical Solutions

Jeffrey Petersen, MD, Amgen

Amy Williams, MD, Mayo Clinic, Rochester, MN

ADVERTISING SALES

The Walchli Tauber Group

2225 Old Emmorton Road, Suite 201, Bel Air, MD 21015

443-252-0571 Mobile

214-704-4628 Phone

kelly.russell@wt-group.com

CLASSIFIED ADVERTISING

443-512-8899 *106

rhonda.truitt@wt-group.com

ASN COUNCIL

President: Eleanor D. Lederer, MD, FASN

President-elect: Mark D. Okusa, MD, FASN

Past-President: Raymond C. Harris, MD, FASN

Secretary-Treasurer: John R. Sedor, MD, FASN

Councilors: Mark E. Rosenberg, MD, FASN, Anupam Agarwal, MD, FASN,

Susan E. Quaggin, MD, Barbara Murphy, MD

Executive Vice President: Tod Ibrahim

Director of Communications: Robert Henkel

ASN Kidney News is published by the American Society of Nephrology
1510 H Street NW, Suite 800, Washington, DC 20005. Phone: 202-640-4660

www.asn-online.org

ASN Kidney News is the authoritative source for analysis of trends in medicine, industry, and policy affecting all practitioners in nephrology. The statements and opinions expressed in *ASN Kidney News* are solely those of the authors and not of the American Society of Nephrology (ASN) or the editorial policy of the editors. The appearance of advertisements in *ASN Kidney News* is not a warranty, endorsement, or approval of the products or services advertised or of their effectiveness, quality, or safety. The American Society of Nephrology disclaims responsibility for any injury to persons or property resulting from any ideas or products referred to in the articles or advertisements.

The American Society of Nephrology is organized and operated exclusively for scientific and educational purposes, including enhancing the field of nephrology by advancing the scientific knowledge and clinical practice of that discipline through stimulation of basic and clinical investigation, providing access to new knowledge through the publication of journals and the holding of scientific meetings, advocating for the development of national health policies to improve the quality of care for renal patients, cooperating with other national and international societies and organizations involved in the field of nephrology, and using other means as directed by the Council of the Society.

Postmaster: Please send address changes to *ASN Kidney News*, c/o Customer Service, American Society of Nephrology 1510 H Street NW, Suite 800, Washington, DC 20005.

Publications mail agreement No. 40624074. Return undeliverable Canadian addresses to PO Box 503, RPO West Beaver Creek, Richmond Hill ON L4B 4R6

ASN Kidney News (ISSN print 1943-8044 and online 1943-8052) is an official publication of the American Society of Nephrology, 1510 H Street NW #800, Washington DC 20005, and is published monthly 11 times a year except November. Periodicals postage paid at Washington, DC and at additional mailing offices. Subscription rates: \$12 per year. To order, please email bhenkel@asn-online.org. Subscription prices subject to change. Annual ASN membership dues include \$12 for *ASN Kidney News* subscription.

Copyright© 2017 All rights reserved