

eHAT, a novel therapy ,reduces blood pressure in hypertensive patients with CKD

Authors, **T. Wolak¹**, **M. Glikson²**, **I. Sukholutsky³**, **S. Silberman³**, **A. Lerman³**, **L. Lerman⁴**

¹ Internal Medicine D, Shaare Zedek Medical Center, Faculty of Medicine, Hebrew University, Jerusalem, Israel ² Jesselson Integrated Heart Center Shaare Zedek Medical Center, Faculty of Medicine, Hebrew University, Jerusalem Israel

³ The Department of Cardiovascular Diseases and ⁴ Division of Nephrology and Hypertension, Mayo Clinic, Rochester, MN, USA

INTRODUCTION

Arterial hypertension (HTN) in association with chronic kidney disease (CKD) is a global healthcare burden, yet clinically proven treatments are limited.

electro-Hydraulic Acoustic Therapy (eHAT), is a promising technique to ameliorate ischemia and regenerate tissues. eHAT has been demonstrated to enhance healing in tissues such as bone, muscle, and myocardium.

Previous animal studies demonstrated that eHAT reduces blood pressure (BP) and preserves renal function after ischemic kidney injury

AIM

To explore the clinical safety and efficacy of eHAT in reducing BP and preserving renal function in patients with diagnosed with hypertension and CKD

METHOD

Prospective, single-arm study.

Six session eHAT regime over a 3-week period, of 2400 shockwaves applied to each kidney at 0.09 mJ/mm², 2.66Hz, (Nephrospec™, Curespec LTD, Yehud, Israel). Follow-up visits at 1, 3, and 6 months

RESULTS

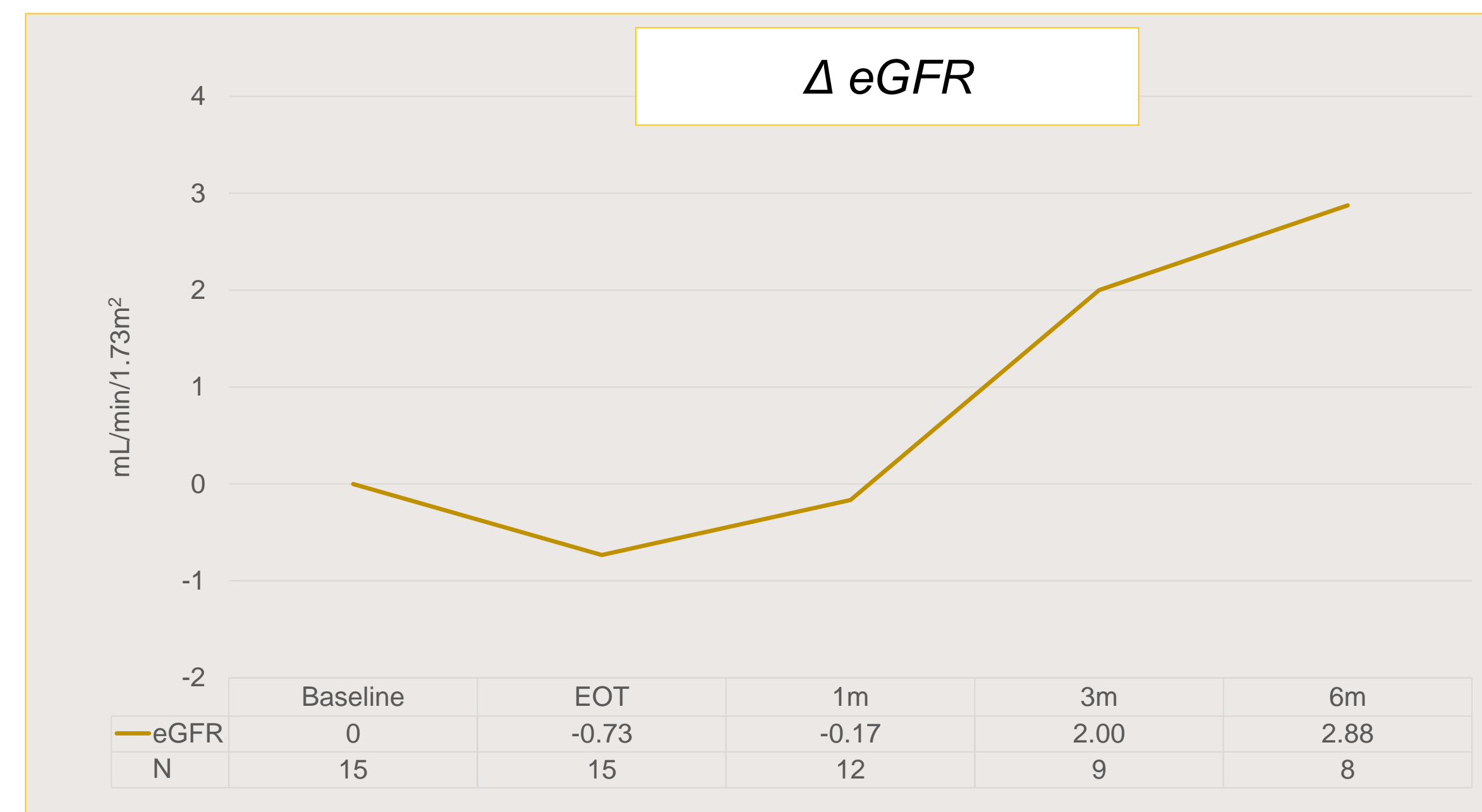
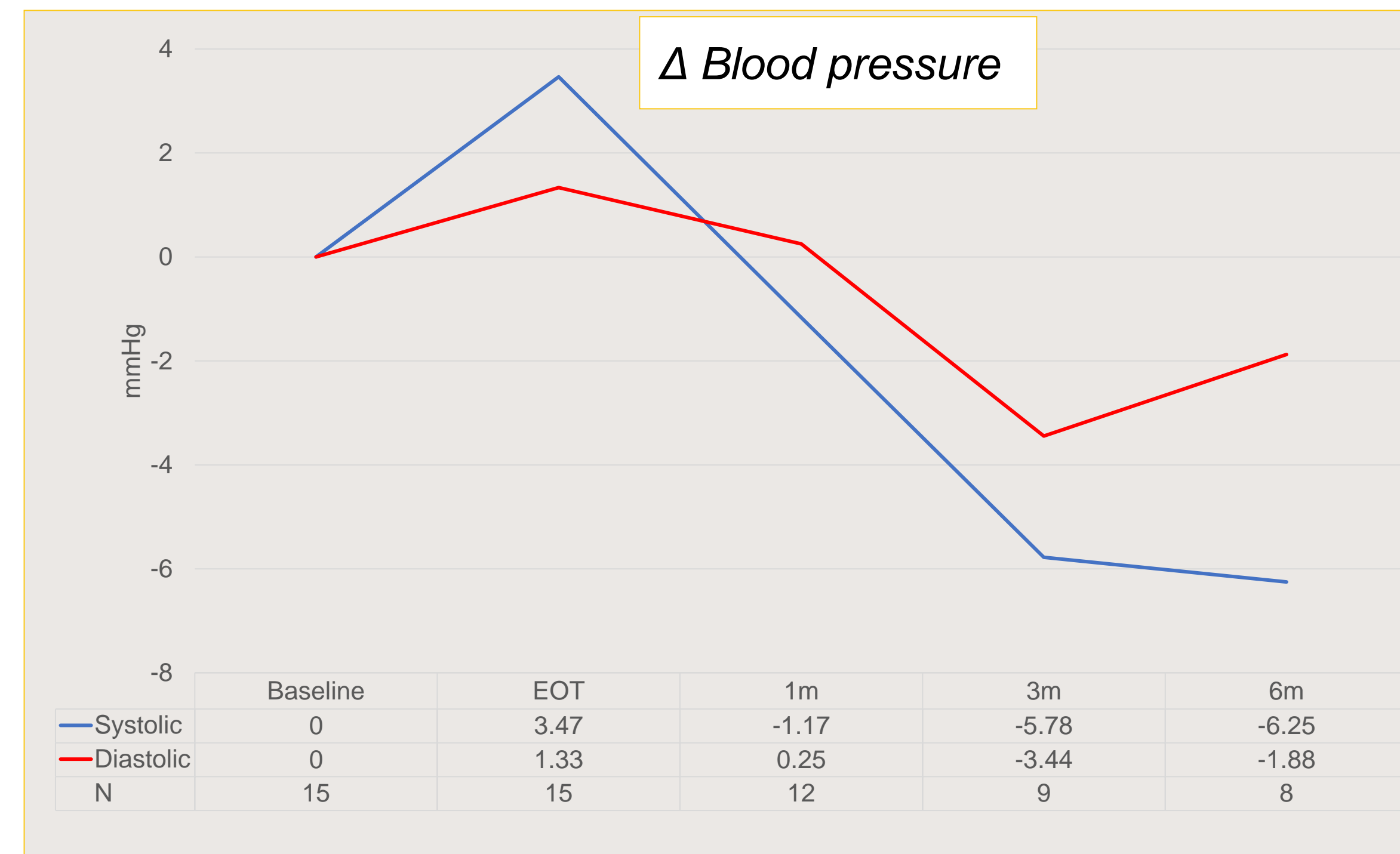
Fifteen (15) patients have been recruited to date.

No device related safety events have been observed

Results showed a decrease in BP from baseline to 3 and 6 months post last treatment.

This change has not reached statistical significance levels

Levels of eGFR were maintained and even slightly rose throughout the study, but this change has not reached statistical significance levels



CONCLUSIONS

This study demonstrates the safety of eHAT in this cohort.

eHAT tended to reduce BP and preserve eGFR in patients diagnosed with HTN and CKD.

eHAT may emerge as a novel, safe, and non-invasive alternative therapeutic approach in the management of HTN in the context of CKD

ACKNOWLEDGEMENTS

REFERENCES

1. Zhang X et al. Low-energy shockwave therapy improves ischemic kidney microcirculation. J Am Soc Nephrol. 2016;27(12):3715-3724.
2. Klomjit et al. It Comes As a Shock: Kidney Repair Using Shockwave Therapy. Hypertension. Published online 2020:1696-1703.
3. Sokolakis I, et al. The Basic Science Behind Low-Intensity Extracorporeal Shockwave Therapy for Erectile Dysfunction: A Systematic Scoping Review of Pre-Clinical Studies. J Sex Med. 2019;16(2):168-194.
4. Burneikaite G et al. Cardiac shock-wave therapy in the treatment of coronary artery disease: Systematic review and meta-analysis. Cardiovasc Ultrasound. 2017;15(1):1-13.

CONTACT INFORMATION

Prof Talya Wolak, talyaw@szmc.org.il.
Internal Medicine D, Shaare Zedek Medical Center, Faculty of Medicine, Hebrew University, Jerusalem, Israel