

Spirolactone Use to Treat Hypertension: in the Right Patient Groups at the Right Time

Yusuf Ziya Şener, Cem Çötelci and Metin Okşul

To the Editor:

We read the article which was about firstline use of spironolactone as monotherapy in the treatment of stage 1 essential hypertension published by Attar et al. with great interest.¹

Angiotensin converting enzyme inhibitors, angiotensin receptor blockers, calcium channel blockers and thiazide diuretics are suggested to be preferred as firstline treatment in patients with stage 1 essential hypertension. Spirolactone is recommended in patients with resistant hypertension which is defined as uncontrolled blood pressure despite three antihypertensive drug combination including a diuretic.²

Spirolactone is a mineralocorticoid receptor antagonist and causes anti-androgenic side effects.³ These anti-androgenic effects can be miserable in males but spironolactone can be a good option for women with polycystic ovary syndrome (PCOS) in whom excess androgens leads menstrual abnormalities, hirsutism and infertility.⁴ There are conflicting datas about the effects of spironolactone on glucose metabolism. Spirolactone increases HbA1C levels and has negative effects on glucose metabolism in patients with heart failure and diabetes while it has positive effects on glucose metabolism in patients with hyperandrogenism.⁵ Mineralocorticoid receptors are expressed in osteoblasts and osteoclasts and they are supported to play role in glucocorticoid related osteoporosis.⁶

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By the light of these datas, firstline use of spironolactone in stage 1 essential hypertension doesn't seem rational due to having other efficient options with less and tolerable side effects. Spirolactone should be preferred in selected patient groups including patients with heart failure, osteoporosis and in patients who can benefit from antiandrogenic effects of the drug such as patients with PCOS or prostat carcinoma.

REFERENCES

1. Armin A, Amir-abbas S, Fatemeh A, Kamran A. Low dose spironolactone monotherapy in the management of stage I essential hypertension: a pilot randomized, double-blind, placebo-controlled trial. *Acta Cardiol Sin* 2018;34:59-65.
2. Whelton PK, Carey RM, Aronow WS, et al. ACC/AHA/AAPA/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/American Heart Association Task Force on clinical practice guidelines. *J Am Coll Cardiol* 2017;Nov 13:[Epub ahead of print].
3. Lainscak M, Pelliccia F, Rosano G, et al. Safety profile of mineralocorticoid receptor antagonists: spironolactone and eplerenone. *Int J Cardiol* 2015;200:25-9.
4. Diri H, Karaburgu S, Acmaz B, et al. Comparison of spironolactone and spironolactone plus metformin in the treatment of polycystic ovary syndrome. *Gynecol Endocrinol* 2016;32:42-5.
5. Korol S, Mottet F, Perreault S, et al. A systematic review and meta-analysis of the impact of mineralocorticoid receptor antagonists on glucose homeostasis. *Medicine (Baltimore)* 2017;96:e8719.
6. Fumoto T, Ishii KA, Ito M, et al. Mineralocorticoid receptor function in bone metabolism and its role in glucocorticoid-induced osteopenia. *Biochem Biophys Res Commun* 2014;447:407-12.

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Department of Cardiology, Hacettepe University Faculty of Medicine, Ankara, Turkey.

Corresponding author: Dr. Yusuf Ziya Şener, Department of Cardiology, Hacettepe University Faculty of Medicine, Sıhhiye, Ankara, Turkey. Tel: +90 3123051781; E-mail: yzsener@yahoo.com.tr