Letter to the Editor
Health promotion, disease prevention, and lifestyle

pISSN: 2287-4208 / eISSN: 2287-4690
World J Mens Health 2021 Apr 39(2): 389-390
https://doi.org/10.5534/wjmh.200138

The World Journal of MEN's HEALTH

Bone Health Risks Associated with Finasteride and Dutasteride Long-Term Use

Maria Maddalena Sirufo[1,2], Lia Ginaldi[1,2], Massimo De Martinis[1,2]

[1]*Department of Life, Health and Environmental Sciences, University of L'Aquila, L'Aquila,* [2]*Allergy and Clinical Immunology Unit, Center for the Diagnosis and Treatment of Osteoporosis, AUSL Teramo, Italy*

Dear Editor.

We read with great interest the work by Traish [1] on the Health Risks Associated with Long-Term Finasteride and Dutasteride Use: It's Time to Sound the Alarm, recently published in the Journal. Traish [1] describes in a very compelling way the several potential long-lasting harmful effects of these 5-reductase inhibitors. He reported findings related to liver, muscle, kidney and ocular system metabolic adverse effects of these two molecules so often prescribed to men in clinical practice. Osteoporosis is one of the most common inflammatory bone loss condition and is an age-related disorder. Its prevalence increases with age and is actually growing due to the constant aging of the population [2]. Bone loss occurs in men with hypogonadism in which is underdiagnosed and undermanaged. Sex steroids, both androgens and estrogens, exert direct and indirect effects on bone tissue and regulate bone homeostasis. Testosterone exerts direct and indirect effects on bone. Recent studies have investigated bone mass loss in subjects on therapy with these molecules with conflicting results. Dutasteride inhibits dihydrotestosterone production to a greater extent than finasteride and men with osteoporosis have lower levels of this androgen than men with normal bone mineral density (BMD). The population-based nested case–control study by Lin et al [3] suggested that the use of finasteride could increase osteoporosis diagnosis risk among patients with benign prostatic hyperplasia. Antoniou et al [4] found no difference in the incidence of a new diagnosis of osteoporosis among older men treated with either dutasteride or finasteride but they used administrative data rather than measurement of BMD to identify patients with osteoporosis. It is clear that further studies are needed on the subject. Considering that osteoporosis in men is responsible for significant morbidity and mortality and that low BMD is a good predictor of future fractures they are still disadvantaged by the lack of a proper gender culture [5].

Primary, secondary and tertiary prevention measures in men are still delayed due to the lack of consensus regarding the guidelines for the screening of osteoporosis in men but above all for the lack of awareness, not only of patients but also of doctors, on osteoporosis and its potentially debilitating consequences especially in men. For these reasons it is important to highlight all potential conditions and medications that can cause bone mass reduction in men.

In conclusion, we hope that our reflections may offer additional information in recognizing possible metabol-

Received: Jul 24, 2020 **Revised:** Jul 25, 2020 **Accepted:** Aug 14, 2020 **Published online** Nov 26, 2020
Correspondence to: Massimo De Martinis https://orcid.org/0000-0003-4253-1312
Department of Life, Health and Environmental Sciences, University of L'Aquila, Piazzale Salvatore Tommasi n. 1, 67100 L'Aquila, Italy.
Tel: +39-0861-429548, **Fax:** +39-0861-211395, **E-mail:** demartinis@cc.univaq.it

The World Journal of MEN's HEALTH

ic adverse effects associated with 5-reductase inhibitors also on skeletal health.

Conflict of Interest

The authors have nothing to disclose.

Author Contribution

Conceptualization: MMS, LG, MDM. Supervision: MMS, LG, MDM. Validation: MMS, LG, MDM. Visualization: MMS, LG, MDM. Writing – original draft: MMS, LG, MDM. Writing – review & editing: MMS, LG, MDM.

REFERENCES

1. Traish AM. Health risks associated with long-term finasteride and dutasteride use: it's time to sound the alarm. World J Mens Health 2020;38:323-37.
2. De Martinis M, Sirufo MM, Ginaldi L. Osteoporosis: current and emerging therapies targeted to immunological checkpoints. Curr Med Chem 2019. doi: 10.2174/0929867326666190730113123 [Epub].
3. Lin WL, Hsieh YW, Lin CL, Sung FC, Wu CH, Kao CH. A population-based nested case-control study: the use of 5-alpha-reductase inhibitors and the increased risk of osteoporosis diagnosis in patients with benign prostate hyperplasia. Clin Endocrinol (Oxf) 2015;82:503-8.
4. Antoniou T, Macdonald EM, Yao Z, Gomes T, Tadrous M, Ho JM, et al.; Canadian Drug Safety and Effectiveness Research Network. A population-based study of the risk of osteoporosis and fracture with dutasteride and finasteride. BMC Musculoskelet Disord 2018;19:160.
5. De Martinis M, Sirufo MM, Polsinelli M, Placidi G, Di Silvestre D, Ginaldi L. Gender differences in osteoporosis: a single-center observational study. World J Mens Health 2020. doi: 10.5534/wjmh.200099 [Epub].