

**Letter to Editor on Evaluation of Thyroid Dysfunction in Patients with Atrial Fibrillation****Atriyal Fibrilasyonlu Hastalarda Tiroid Fonksiyon Bozukluğunun Değerlendirilmesi  
Konusunda Editöre Mektup**<sup>1</sup>Irem SENOYMAK<sup>1</sup>Department of Family Medicine, Uskudar State Hospital, Istanbul, Türkiyeİrem Şenoymak: <https://orcid.org/0000-0002-1137-2542>**ABSTRACT**

I have read with great interest the research article by Varım and Demirci, titled "Evaluation of Thyroid Dysfunction in Patients with Atrial Fibrillation", published in Volume 8, Issue 3 of the Online Turkish Journal of Health Sciences in 2023. I would like to express our appreciation to the authors and the editorial board for this insightful and informative article. In this letter, I aim to address specific points that I believe will enhance the discussion of the article.

**Keywords:** Atrial fibrillation, hyperthyroidism, hypothyroidism

**ÖZ**

Online Türk Sağlık Bilimleri Dergisi'nin 2023 yılı, 8. cilt ve 3. sayısında yayımlanan Varım ve Demirci tarafından kaleme alınmış olan "Atriyal Fibrilasyonlu Hastalarda Tiroid Fonksiyon Bozukluklarının Değerlendirilmesi" başlıklı araştırma makalesini büyük bir ilgiyle okudum. Bu değerli ve bilgilendirici makale için yazarlara ve editöryal kurula teşekkürlerimi sunmak isterim. Bu mektupta, makalenin tartışma bölümünü zenginleştireceğine inandığım belirli noktalara değinmeyi amaçlıyorum.

**Anahtar Kelimeler:** Atriyal fibrilasyon, hipertiroidizm, hipotiroidizm

**Sorumlu Yazar / Corresponding Author:**

İrem Şenoymak  
Barbaros, Veysi Paşa St. Nu:14, 34662 Uskudar/ Istanbul  
Tel.: +90 534 340 00 21  
Email: ireemakman94@gmail.com

**Yayın Bilgisi / Article Info:**

Gönderi Tarihi/ Received: 02/02/2024  
Kabul Tarihi/ Accepted: 27/02/2024  
Online Yayın Tarihi/ Published: 16/06/2024

**Atf/ Cited:** Şenoymak İ. Letter to Editor on Evaluation of Thyroid Dysfunction in Patients with Atrial Fibrillation. *Online Türk Sağlık Bilimleri Dergisi* 2024;9(2):187-188. doi: 10.26453/otjhs.1462646

Dear Editor,

I have read with great interest the research article by Varım and Demirci, titled "Evaluation of Thyroid Dysfunction in Patients with Atrial Fibrillation", published in Volume 8, Issue 3 of the Online Turkish Journal of Health Sciences in 2023.<sup>1</sup> I would like to express my gratitude to the authors and the editorial board for their informative and insightful article. In this letter, I will address specific points that I believe will further enhance the discussion of the article.

In this study, the authors assessed thyroid function tests in patients newly diagnosed with atrial fibrillation and obtained noteworthy results. They indicated a higher prevalence of thyroid dysfunction in these patients. The correlation between both overt and subclinical hyperthyroidism and atrial fibrillation (AF) is extensively supported in medical literature and constitutes a frequently addressed issue.<sup>2</sup> Moreover, as emphasized in the research conducted by Varım and Demirci, the association between hypothyroidism and AF is under scrutiny in recent stud-

ies, with diverse findings being reported.

In the review conducted by Baumgartner et al., which encompassed a cohort of 30,085 patients, no association was found between elevated TSH levels and atrial fibrillation.<sup>3</sup> However, Huang et al.'s meta-analysis of 13 studies involving 649,293 patients revealed that while subclinical hypothyroidism was linked to a heightened risk of atrial fibrillation (AF), overt hypothyroidism did not show an increased AF risk.<sup>4</sup>

In the study by Varım and Demirci, 587 patients with atrial fibrillation were examined, revealing incidences of hypothyroidism at 0.3% and subclinical hypothyroidism at 2%. These rates were compared with population data for individuals aged 12 and older, indicating a lower prevalence than that of the general population.<sup>5</sup> Since atrial fibrillation is known to be more common in older age groups, I think that it would be appropriate to mention that comparing the findings with age- and gender-matched control groups rather than population data could yield more meaningful results with a stronger level of evidence.

Moreover, it is worth noting that while the discussion section of the study highlights a lower prevalence of overall hypothyroidism compared to the general population, the conclusion section of the abstract asserts that "Atrial Fibrillation is associated with both hyperthyroidism and hypothyroidism." However, it should be acknowledged that the study does not offer substantial evidence to substantiate this claim.

In conclusion, I would like to express my sincere gratitude to the authors for their invaluable contribution to this study. It is of utmost importance to evaluate thyroid function tests in patients with atrial fibrillation. Since atrial fibrillation poses a significant burden on society in terms of morbidity, mortality, and healthcare expenditures, it is imperative to accurately identify risk factors and implement appropriate community screening measures.<sup>6</sup> Given the contemporary data suggesting hypothyroidism as a potential risk factor, further studies are needed to increase evidence-based medical knowledge regarding the relationship between subclinical and overt hypothyroidism and atrial fibrillation. For this purpose, studies could be conducted that compare thyroid function between AF and sinus rhythm groups. These studies should involve extensive patient participation, particularly in the geriatric population where AF is prevalent, and ensure matching for age, gender and other comorbidities.

**Ethics Committee Approval:** Ethics committee approval is not required for Letter Writing to the Editor.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Author Contributions:** Concept – IS; Supervision – IS; Materials – IS; Data Collection and/or Processing – IS; Analysis and/or Interpretation – IS; Writing – IS.

**Peer-review:** Editorial review

## REFERENCES

1. Varim P, Demirci T. Evaluation of thyroid dysfunction in patients with atrial fibrillation. *Online Türk Sağlık Bilimleri Dergisi*. 2023;8(3):345-349. doi:10.26453/otjhs.1270244
2. Reddy V, Taha W, Kundumadam S, Khan M. Atrial fibrillation and hyperthyroidism: A literature review. *Indian Heart Journal*. 2017;69(4):545-550. doi:10.1016/j.ihj.2017.07.004
3. Baumgartner C, Da Costa BR, Collet TH, et al. Thyroid function within the normal range, subclinical hypothyroidism, and the risk of atrial fibrillation. *Circulation*. 2017;136(22):2100-2116. doi:10.1161/CIRCULATIONAHA.117.028753
4. Huang M, Yang S, Ge G, Zhi H, Wang L. Effects of thyroid dysfunction and the thyroid-stimulating hormone levels on the risk of atrial fibrillation: A systematic review and dose-response meta-analysis from cohort studies. *Endocrine Practice*. 2022;28(8):822-831. doi:10.1016/j.eprac.2022.05.008
5. Thyroid Diseases Diagnosis and Treatment Guide 2020. Turkish Society of Endocrinology and Metabolism [https://file.temd.org.tr/Uploads/publications/guides/documents/20200929134733-2020tbl\\_kilavuzf527c34496.pdf?a=1](https://file.temd.org.tr/Uploads/publications/guides/documents/20200929134733-2020tbl_kilavuzf527c34496.pdf?a=1). Accessed January 08, 2023.
6. Lobeek M, Middeldorp ME, Van Gelder IC, Rienstra M. Multimorbidity in patients with atrial fibrillation. *Open Heart*. 2024;11(1):e002641. doi:10.1136/openhrt-2024-002641