

# Response to commentary on ‘Dynamic Thebesian veins anomaly in a patient with recurrent tako-tsubo-like syndrome’

Maciej Tomasz Wybraniec

First Department of Cardiology, School of Medicine in Katowice, Medical University of Silesia, Katowice, Poland

Adv Interv Cardiol 2024; 20, 2 (76): 240  
DOI: <https://doi.org/10.5114/aic.2024.139812>

In the present issue of “Advances in Interventional Cardiology” Dr. Brett Snodgrass commented on our clinical vignette entitled “Dynamic Thebesian veins anomaly in a patient with recurrent tako-tsubo-like syndrome”, referring to the misuse of the term ‘Thebesian veins’, which was utilised to describe connections between the left anterior descending coronary artery and left ventricle, which presumably contributed to tako-tsubo-like syndrome [1]. Dr. Snodgrass delineated that these vessels could in fact be arterial fistulas connecting coronary arteries and heart chambers, namely vessels of Wearn [2], which could be responsible for myocardial steal phenomenon. We agree with the comment that the dynamic nature of the anomaly, which was visible in a coronary angiogram from 2023 and not visible in the study from 2012, speaks in favour of the arterial type of the vessels. However, the debate over the nature of this connection is not finished. First, the abundant and abnormal venous return could be responsible for massive left to right shunt leading to hypoxaemia [3], myocardial ischaemia, and a similar clinical and echocardiographic image as myocardial steal phenomenon, which we have referred to in our manuscript [1]. Second, after contrast administration, the connection was only visible in the left ventricle after 2–3 cardiac cycles, which suggests transfer of blood through coronary microcirculation rather than a direct connection between the artery and heart chamber. Third, only a histopathological study would be conclusive in establishing the true character of the vessels observed in the present case. A more recent animal-based histopathological report provided proof of the presence of Thebesian veins

in both ventricles, while vessels of Wearn were only present in the right ventricle [3]. All things considered, the distinction between both type of vessels is vital, but regardless of whether we are dealing with the vessels of Wearn and Thebesian veins, both could be responsible for this clinical manifestation, and interventional cardiologists should be aware of the possibility of such an angiographic finding. This debate should be an incentive to further human post-mortem histopathological research, which could deliver data on the true prevalence of both types of vessels in the human heart and their role in cardiac vasculature.

## Funding

No external funding.

## Ethical approval

Not applicable.

## Conflict of interest

The author declares no conflict of interest.

## References

1. Drabczyk M, Kampka Z, Cichoń M, et al. Dynamic Thebesian veins anomaly in a patient with recurrent tako-tsubo-like syndrome. *Adv Interv Cardiol* 2024; 20: 119-20.
2. Wearn JT, Mettier SR, Klumpp TG, Zschiesche LJ. The nature of the vascular communications between the coronary arteries and the chambers of the heart. *Am Heart J* 1933; 9: 143-64.
3. Ansari A. Anatomy and clinical significance of ventricular Thebesian veins. *Clin Anat* 2001; 14: 102-10.

---

### Corresponding author:

Dr. Maciej Tomasz Wybraniec, First Department of Cardiology, School of Medicine in Katowice, Medical University of Silesia, Katowice, Poland, phone: +48 323 598 890, e-mail: [maciejwybraniec@gmail.com](mailto:maciejwybraniec@gmail.com)

Received: 2.05.2024, accepted: 5.05.2024, online publication: 22.05.2024.