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Letter-to-Editor

Pituitary dysfunction in heart block: The need for broader insight

Sir,

I read with great interest the article by Laway *et al*[1] published in the June 2024 issue of the Indian Journal of Medical Research. While this study shows an important link between complete heart block (CHB) and anterior pituitary dysfunction, I would like to raise several points.

First, the study's small cohort (n=30) limits the generalisability of its conclusion. With such a small cohort, it is difficult to conclude whether the observed hormonal dysfunctions are applicable to the general population[1].

Furthermore, confounding factors such as prior trauma, comorbidities, and the impact of medication have not been discussed. These factors could influence anterior pituitary hormone levels and should be accounted for in future studies[2].

Finally, the study shows an association, but does not mention the mechanism linking CHB with anterior pituitary dysfunction. Understanding the mechanism would greatly enhance the clinical significance of this study. Previous research shows that hypoperfusion of the hypothalamic-pituitary axis (HPA) can modify the function of HPA, which can lead to anterior pituitary dysfunction[3].

Laway *et al*[1] presented a valuable study showing a link between anterior pituitary dysfunction and CHB. Nevertheless, a more detailed study with a larger cohort, which also describes the confounding factors and the mechanism linking CHB to anterior pituitary dysfunction, is needed.

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References

1. Laway BA, Viswanath SA, Baba MS, Tramboo NA, Shah ZA, Lone AA, *et al*. Anterior pituitary hormone dysfunction among individuals with complete heart block requiring pacemaker. *Indian J Med Res* 2024; *159* : 695-701.
2. Ebrahimi F, Kutz A, Wagner U, Illigens B, Siepmann T, Schuetz P, *et al*. Excess mortality among hospitalized patients with hypopituitarism – a population-based, matched-cohort study. *J Clin Endocrinol Metab* 2020; *105* : e3910-8.
3. Radak D, Resanovic I, Isenovic ER. Changes in hypothalamus-pituitary–adrenal axis following transient ischemic attack. *Angiology* 2014; *65* : 723-32.

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Authors' response

Sir,

We greatly appreciate the reader's interest in our article[1] published in the June 2024 issue of Indian Journal of Medical Research, which has raised intriguing questions.

As rightly pointed by the author that the aforementioned study has a small sample size, and its conclusions may not be generalizable[2]. This represented our attempt to study pituitary functions within this cohort of patients, and we hope that larger studies will be conducted in the future.

Regarding confounding factors, we excluded all chronic diseases and conditions, including drug intake that could have interfered with the assessment

of pituitary hormones. Furthermore, the patients were monitored and reassessed, which plausibly minimized the impact of acute stress on pituitary hormones.

As mentioned in the introduction of the article, we hypothesized that hypoperfusion due to a complete heart block could lead to vasospasm and hypoxia of pituitary tissue, resulting in long-term pituitary dysfunction[3].

We once again thank the reader for their insightful comments and the opportunity to elaborate on our study.

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References

1. Laway BA, Viswanath SA, Baba MS, Tramboo NA, Shah ZA, Lone AA, *et al*. Anterior pituitary hormone dysfunction among individuals with complete heart block requiring pacemaker. *Indian J Med Res* 2024; *159* : 695-701.
2. Zarrar M. Pituitary dysfunction in heart block: The need for broader insight. *Indian J Med Res* 2025; *161* : 428.
3. Youngquist ST, Niemann JT, Heyming TW, Rosborough JP. The central nervous system cytokine response to global ischemia following resuscitation from ventricular fibrillation in a porcine model. *Resuscitation* 2009; *80* : 249-52.