Revista Portuguesa de Cardiologia 42 (2023) 681–682

Revista Portuguesa de
Cardiologia
Portuguese Journal of Cardiology
www.revportcardiol.org

LETTER TO THE EDITOR

Takotsubo syndrome and lactation: Further insights

Síndrome de Takotsubo e lactação: mais informações

Our team is glad that this case report has raised interest in the role of estrogen in Takotsubo syndrome (TTS).[1]

Even after many years of research, the pathophysiology of Takotsubo syndrome cannot be explained by a unified hypothesis.[2,3] This probably means that TTS is a complex entity in which multifactorial causes are constantly weighted (from its biological background to environment/triggers and underlying disease), leading to the probability of suffering or not from this phenotype.

Sex disparity, especially being female, is a well-recognised predisposing factor for clinical probability of TTS[4] and it is the main contributing factor to the InterTAK Diagnostic score.[5] However, this relationship is not well established in pre-menopausal women. The underlying mechanism is related to the cardioprotective action of estrogen, a hormone that may be inhibited in some life stages of a premenopausal female – such as during peripartum period and lactation. Solid evidence to ascertain this hypothesis in humans is still lacking, and the available data remain animal-based.[6–8] Nonetheless, we believe that these stages of a female's reproductive life may represent an important element in the ''cocktail'' of multifactorial causes leading to TTS. After the journal's acceptance of our report, in 2019, another case of a lactating young woman that suffered from TTS (in this case, reverse TTS) was published. In this case, the patient developed cardiogenic shock during hospital stay, and was discharged with normal left ventricle ejection fraction.[9]

We gladly report that our patient,[1] a 22-year-old lactating woman, whose TTS event reports back to 2017, has been followed-up ever since and is free from cardiovascular symptoms, with normal echocardiogram and no recurrences. Neither strain/strain rate nor diastolic stress testing has been performed. Even though she is free from cardiovascular disease, we have recommended a cardiology appointment and coordination with gynaecology/obstetrics in the event of new pregnancies. She has not had any more children since then.

The authors thank Yalta et al. for the appropriate comment regarding our report. Both discussed hypotheses for the physiopathology of this case, besides the protection role of estrogens, are relevant and they have one common link – the role of prolactin in inhibiting the gonadal axis and enabling a peripartum cardiomyopathy-like syndrome due to 16 kDa prolactin fragment. Since there is no available biochemical/molecular evidence in this case, we can only hypothesize that this is a plausible explanation.

Since there is no solid evidence to sustain the recommendation to abstain from further breastfeeding or upfront anti-prolactin agents (patient has normal left ventricle ejection fraction and no confirmed peripartum cardiomyopathy[10]), we would refrain from giving this kind of advice to the patient.

The patient was discharged asymptomatic and with normal left ventricle ejection fraction. We are not sure of the requirement for further workup regarding potential subclinical myocardial dysfunction based on the available information – nevertheless it could be interesting to interpret diastolic stress testing and myocardial strain in a clinical research setting.

Fortunately, TTS in young women is a rare diagnosis, which leads to a lack of high-grade evidence. This is a setting in which case reports and case report series are of high value. We hope that our publication keeps raising awareness of TTS during lactation, and if possible, we are able to conduct further research.

Funding

None declared.

Conflict of interest

None declared.

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Diogo Rodrigues-Brás[a,b]

[a] *Cardiology Department, Hospital Espírito Santo Évora EPE, Évora, Portugal*
[b] *Cardiovascular Responsibility Centre (CRIA), Hospital Espírito Santo Évora EPE, Évora, Portugal*
E-mail address: dbras@hevora.min-saude.pt