

Case Study- Post Partum T wave changes- a PPH case study.

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BACKGROUND

Symptomatic anaemia following a post partum haemorrhage (PPH) is a common complication following childbirth. If left untreated it can cause serious and life-threatening complications.^{1,2} The purpose of this case study is to show how symptomatic anaemia following a post partum haemorrhage (PPH) can present with dynamic Electrocardiogram (ECG) changes. Whilst anaemia following a PPH is common, clinicians rarely see evidence of the effect it has on a patient's cardiovascular system.

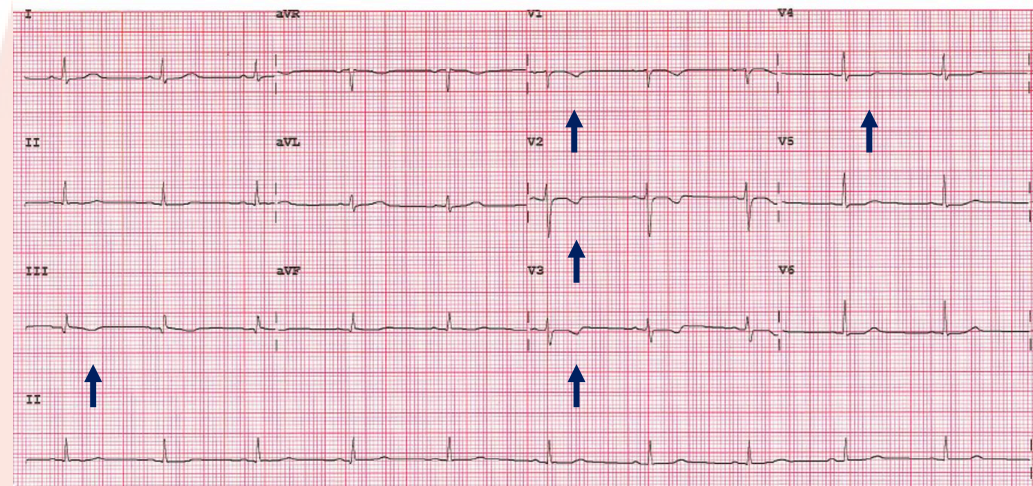
AIM

To demonstrate evidence of right heart strain on ECG, including T-wave changes in a postnatal woman with symptomatic anaemia and to discuss differential diagnoses of T wave inversion.

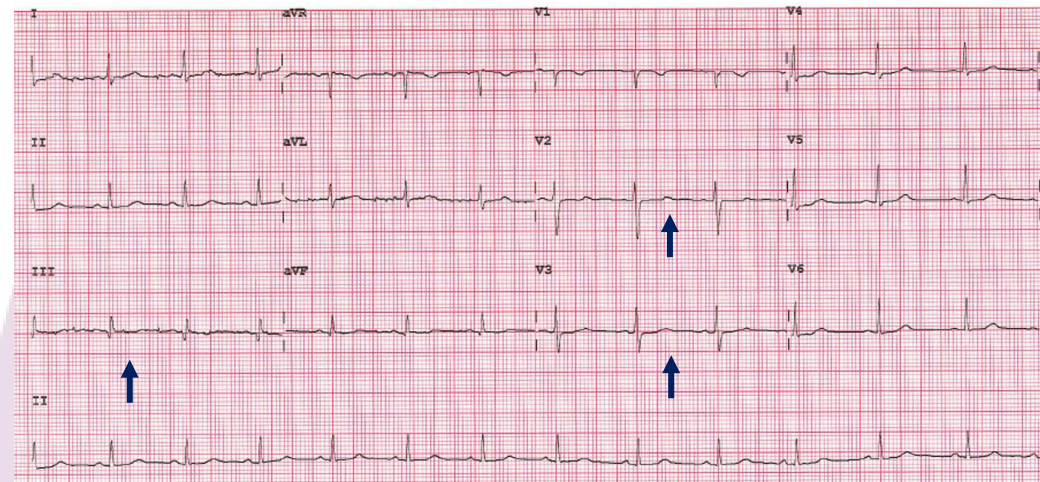
CASE

- 35-year-old female P0
- Low risk pregnancy
- Spontaneous vaginal delivery with episiotomy that was sutured
- Hb 123 on admission
- 1.4L PPH secondary to tone and trauma
- Post partum Hb 80 leading to symptomatic anaemia and associated shortness of breath and chest pain.
- Post-partum fever 6 hours post delivery to 38.7degrees, afebrile since with no source identified. Negative Septic Screen.

RESULTS



ECG 1- showing T wave inversion in anterior leads (Lead 3, V1-V3, Flat T wave in V4). Hb 80 with associated chest pain.



ECG 2- showing resolution of T wave inversion in anterior leads (Lead 3, V2, V3) After Iron Infusion, Hb 92. Pain free at time of repeat ECG.

DISCUSSION

The case provides an interesting discussion surrounding differential diagnosis of post-partum chest pain and shortness of breath with ECG changes.

Differential diagnoses³ include:

- pulmonary embolism
- peripartum cardiomyopathy
- myocardial infarction
- cerebral disorders
- pulmonary disorders,
- tachyarrhythmia states

The case demonstrates ECG changes, namely T wave inversion in anterior leads which resolved within 24 hours following treatment of the anaemia with an iron infusion. Whilst the immediate PPH is recognised as an obstetric emergency, the potential cardiovascular implications following the PPH must also be considered, as demonstrated in this case.

REFERENCES

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- ³ Said, S. A., Bloo, R., de Nooijer, R., & Slootweg, A. (2015). Cardiac and non-cardiac causes of T-wave inversion in the precordial leads in adult subjects: A Dutch case series and review of the literature. *World journal of cardiology*, 7(2), 86-100. <https://doi.org/10.4330/wic.v7.i2.86>