

Successful outcome of pregnancy with complete heart block

Dr Tehreem khalid, Dr Durr-e-Shehwar, Dr Faryal Anees

Introduction

Complete heart block (CHB) affects 1 in 15,000 to 20,000 live births and can be congenital or acquired, though the acquired form is rare in pregnancy. It involves a complete dissociation between atrial (P waves) and ventricular (QRS) activity, with the atrial rate being faster. ECG shows regular P-P and R-R intervals, more P waves than QRS complexes, and no coordination between them. CHB is uncommon in women of reproductive age, leading to limited case reports. As a result, no standardized treatment guidelines exist for CHB during pregnancy.

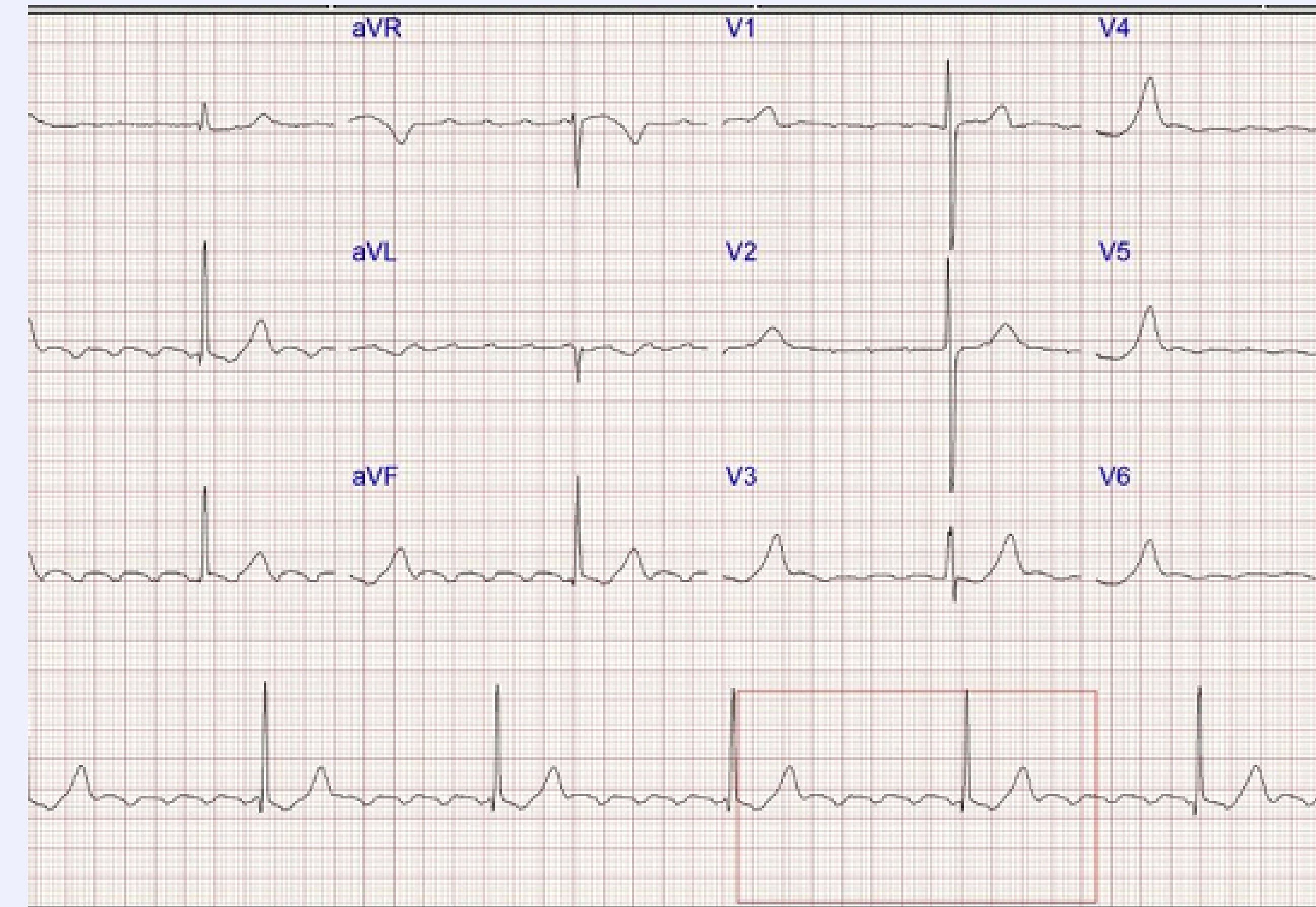
Case

26-year-old primigravida at 20 weeks gestation with a history of complete heart block due to congenital PDA and past embolic strokes was referred for high-risk obstetric evaluation. Warfarin was replaced with enoxaparin at 16 weeks. She remained asymptomatic with stable vitals and a pulse of 42 bpm. Antenatal checkups showed normal fetal growth and a regular fetal heart rate of 132 bpm.

Investigation

Antenatal course remained uneventful, and tests for connective tissue and inflammatory disorders were negative. ECG showed atrial flutter with 4:1 block and a ventricular rate of 38 bpm.

Echocardiography revealed normal cardiac function with a 3mm PDA and normal fetal growth and echocardiogram findings.



Discussion & Conclusion

Pregnancy induces major cardiovascular changes, including increased cardiac output and reduced systemic vascular resistance, which can challenge patients with CHB. Though CHB is rare in pregnancy, most cases are congenital and may remain asymptomatic until adulthood. Management is individualized, with temporary pacing and anesthesia tailored to the patient's condition. Spinal anesthesia can be used cautiously in emergencies. Vaginal delivery is often preferred, but C-section may be necessary for obstetric reasons. Contraceptive counseling post-delivery includes reversible options like IUDs and implants, with sterilization as a permanent choice.

In conclusion, comprehensive guidelines for the management of pregnancy in patients with complete heart block are essential to ensure optimal maternal and fetal outcomes.

Treatment & Followup

At 33 weeks, a multidisciplinary team planned delivery at 36 weeks via elective LSCS after temporary pacemaker insertion. However, the patient went into labor at 35 weeks and underwent an emergency C-section under spinal anesthesia with a temporary pacemaker placed. She delivered a healthy baby girl (2.5 kg, APGAR 8/1 and 9/5), with stable intraoperative and postoperative vitals. Postoperatively, she required blood transfusion for a hemoglobin drop to 7.3 g/dl but remained asymptomatic. She was discharged in stable condition and advised to continue LMWH for 4 weeks.

References

- Baghel K et al. J Obstet Gynaecol India. 2016;66(S2):623-5.
- Swain S et al. BMJ Case Rep. 2022;15(1):e244598.
- Soma-Pillay P et al. Cardiovasc J Afr. 2016;27(2):89-94.
- Mandal S et al. J Preg Child Health. 2015;1(1):104.
- Hidaka N et al. Pacing Clin Electrophysiol. 2011;34(9):1161-76.
- Kumar AU et al. Indian J Anaesth. 2012;56(1):72-4.
- Suri V et al. J Obstet Gynaecol Res. 2009;35(3):434-7.
- Sundararaman L et al. J Clin Anesth. 2016;33:58-61.
- Irianti S et al. Ann Med Surg. 2022;75:103441.
- Swan L. Best Pract Res Clin Obstet Gynaecol. 2014;28(4)