

## Left bundle branch block during pregnancy as a sign of imminent peripartum cardiomyopathy

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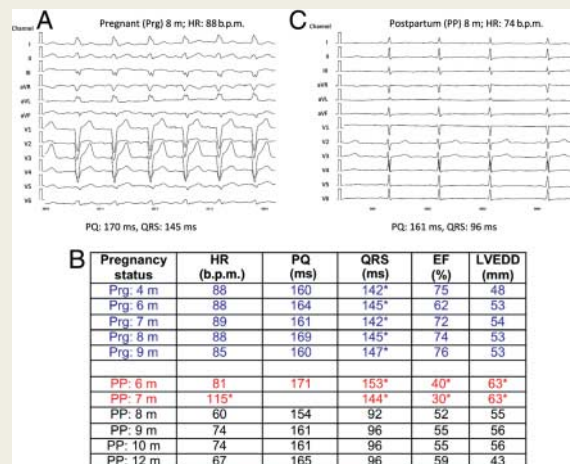
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We describe the development of peripartum cardiomyopathy (PPCM) in a 32-year-old woman. Because of a known cardiomyopathy of her mother, she obtained five cardiologic examinations from the gestational age of weeks 16–38 with ECG and echocardiograms. Except that the ECG showed a complete left bundle branch block (LBBB), the patient experienced no cardiac disorder throughout her pregnancy (Panels A and B, Supplementary material online). After spontaneous and uncomplicated vaginal delivery of a eutrophic daughter, she was discharged from hospital in a healthy condition. Six months later, she had another follow-up ECG and echocardiogram where she did not report any dyspnoea or oedema but the LBBB persisted and she displayed a left ventricular enlargement and reduced ejection fraction (EF) of 40% (Panel B). A week later, she presented with an EF of 30% and persistent LBBB (Panel B), symptoms of dyspnoea and dry cough, and was admitted to hospital. After exclusion of common causes for heart failure, i.e. no evidence of ischaemia and late enhancement by MRI and no evidence of significant valvular heart disease by echo, no evidence of myocarditis and amyloidosis by right ventricular biopsy, PPCM was diagnosed. The patient, still nursing at that time, was ablated with the prolactin blocker bromocriptine (2.5 mg/day for 10 days, Supplementary material online) and heart failure medication (ACE-inhibitors, diuretics, beta-blockers) was initiated. Since an anti-angiogenic 16 kDa fragment generated from prolactin seems to be a driving factor in PPCM (see Hilfiker-Kleiner *et al.*, *Cell* 2007;**128**:589–600), blocking prolactin by bromocriptine may promote recovery in PPCM patients, a notion supported by a small, randomized clinical trial in PPCM patients (Sliwa *et al.*, *Circulation* 2010;**121**:1165–1173). Indeed, the patient showed rapid improvement (Panel B). Follow-up visits up to 12 months postpartum showed normalized cardiac dimension and function and LBBB had disappeared (Panels B and C). Our case report reveals that LBBB in a pregnant woman should be taken seriously and may be the first and only sign of developing PPCM.

*Panel A.* ECG of the patient at 8 months of pregnancy, recorded at 50 mm/s and 10 mm/mV, showing complete left bundle branch block during uneventful pregnancy.

*Panel B.* Table displaying heart rate (HR), PQ, QRS, ejection fraction (EF), and left ventricular end-diastolic diameter (LVEDD) throughout pregnancy (Prg, blue), onset of PPCM 6 months postpartum (PP, red), and recovery starting 8 months postpartum monitored to 12 months postpartum (PP, black). Asterisks indicate abnormal QRS, EF, LVEDD, and HR.

*Panel C.* Normal ECG of the patient 8 months postpartum, recorded at 50 mm/s and 10 mm/mV.



### Supplementary material

Supplementary material is available at *European Heart Journal* online.