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Peripartal Management of Fetal LQTS with Polymorphic Arrhythmias: High Dose Magnesium Therapy, β-Blocker and Vaginal Delivery

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Introduction
Peripartal management of a fetal LQTS and initiation of a vaginal birth. Case report with interesting echo findings (A-MM, C-TDI) of a symptomatic fetal LQTS.

Case
- 29 year old Gravida I with maternal LQTS II
- Inpatient admission 35th WG with fetal sinus bradycardia and polymorphic tachyarrhythmias: VES, SVES, SVT, bigeminus and short torsades
- Under high dose magnesium therapy (average level: 1.51 mmol/l) arrhythmia frequencies could be significantly reduced.
- Daily US controls showed a normal growth
- Misoprostol induction
- Vaginal delivery under magnesium therapy with CTG monitoring
- Vacuum extraction in the 41st WG due to suspicious CTG
- 3225 g, APGAR 9/10/10, BE -7.4 mmol/l, pH 7.20
- Neonatal QTc 620 ms (LQTS)
- Postpartum therapy with propranolol 3mg/kg/d

Fig. 1:  
a) Sinus rhythm of both atria (Anatomical M-Mode)  
b) Simultaneous ventricular extrasystole (AMM) with interventricular dyssynchrony  
c) Ventricular extrasystole (C-TDI)  
d) Torsade tachycardia with interventricular dysynchrony (C-TDI)

Fig. 2: CTG 37+1 WG, BL 100 bpm < 3. Perc.

Conclusion
- Elective caesarean sections from 35 WG are described and recommended in the literature
- We describe a successful magnesium therapy in symptomatic fetal LQTS and successful Misoprostol induction with possible CTG monitoring. To our knowledge, this is the first description of vaginal delivery under magnesium therapy in symptomatic fetal LQTS
- This experience should be taken into account when making an individual decision to treat a similar case