The efficacy and safety of Amiodarone treatment for fetal tachycardia

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Although there is a little literature, Amiodarone is recommended as third-line therapy for fetal tachyarrrhythmia due to more toxicity profile than other antiarrhythmic drugs. The goal of this study was to establish the effectiveness and safety of Amiodarone treatment. We reviewed outcome of 107 fetuses treated for tachyarrhythmia between 2002 and 2014 in our institution. Basing on experience in neonates we prospectively introduced Amiodarone in 64 fetuses. Amiodarone was first choice in fetuses with hydrops and/or long VA time during tachycardia. In fetuses with short VA time Digoxin was first choice, if not effective after 7 days Amiodarone was added. Amiodarone was given orally in all but 3 mothers. Daily dose was between 900-1200mg, if effective reduced and continue throughout gestation. The treatment was effective when sinus rhythm was restored. The TSH level were checked in mothers and in newborns. There were 53 fetuses with supraventricular tachycardia (gr.I), 11 with atrial flutter (gr.II). In gr.I 21 fetuses had NIHF. The CVS was measured in 50. Before treatment 10 fetuses had score between 0-4, 26 between 5-7 and 14 between 8-10. It has improved to 1 with score 4, 9 between 5-7 and 40 between 8-10. Amiodarone as the only drug was used in 20 effective in 16(80%), Amiodarone with Digoxin was used in 28, effective in 24(85%). Combined therapy Amiodarone+Metoprolol -1, Amiodarone+Digoxin+Metoprolol-3, Amiodarone+Digoxin+Propafenone-1, were effective. In gr.II 2 had NIHF. The CVS was measured in 9 fetuses. Before treatment there were 1 fetus with score 4, 3 between 5-7 and 6 between 8-10. After treatment all fetuses improved CVS and had between 8-10. Amiodarone alone was used in 5 pts, effective in 4(80%), Amiodarone with Digoxin in 5, effective in 1(20%), Amiodarone+Digoxin+Propafenone in 1 and was not effective. For both group, the side effect of Amiodarone were seen in 11 (17%) mothers: venus thrombosis in 1, rash in 2, increased skin pigmentation 1, only elevated TSH level in 6, hypothyrosis in 1. In all but 4 newborn TSH level was normal. Remaining 4(6%) newborns developed hypothyreosis and required short-therm thyroid hormonal substitution. Amiodarone is highly effective for fetal tachyarrhythmias. The complication rate is low.