

When flecainide is not available... A single center experience in treating fetal supraventricular tachycardia (SVT)

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The first-line treatment for fetal supraventricular tachycardia(SVT) are digoxin and flecainide. Due to the fact, that flecainide is not available in our country, we decided to use amiodarone in such cases instead.

We reviewed charts of fetuses treated for SVT in our Center between 2002 and 2017. We analyzed the effectiveness of treatment of paroxysmal and permanent SVT. We examined the maximal fetal heart rate(FHR), fetal condition at the introduction of the treatment by Cardiovascular Profile Score(CVPS), drugs applied with special consideration of amiodarone and treatment effectiveness. The time of conversion to sinus rhythm or improvement in CVPS were taken into account.

There were 114 SVT diagnosed cases (47 paroxysmal, 67 permanent). Average gestational age at diagnosis was 28. The VA was long in 59 fetuses, short in 30, 4 had variable time and in 21 VA wasn't determined. Most of the cases were treated (106/114; 93%). The average maximal FHR among treated group was 246/min, the average CVPS before treatment was 6 and fetal hydrops was diagnosed in 26,42 % of cases. Digoxin was used in monotherapy in 21 fetal SVT mostly with short VA without hydrops (95% success, average time to conversion to sinus rhythm – 8 days). Amiodarone as an only treatment was applied in 38 cases with long VA SVT and/or SVT with hydrops (97,4% success, average time to conversion – 6 days). A combination of those two drugs was used in 36 patients (83,3% success). 10 pts were treated with metoprolol (7 in monotherapy). Other drugs were additionally used in 6 non-responding cases (propranolol - 1, propafenone - 1, sotalol - 2 or adenosine injected directly to the umbilical vein - 3).

In total, SVT treatment was effective in 90,6 % of cases. In 4 unsuccessful cases, we achieved slowdown of the rhythm and improvement in CVPS. In amiodarone group only mild side effects occurred – TSH rise (8pts, no need of dosage change), itchiness/cholestasis/abnormal liver enzymes (3pts), vasculitis (3pts) and rash (2pts).

We proved, that amiodarone is an effective and safe drug for treatment of supraventricular tachycardia in fetuses if flecainide is inaccessible