Letter by Uzun et al Regarding Article, “Comparison of Transplacental Treatment of Fetal Supraventricular Tachyarrhythmias With Digoxin, Flecainide, and Sotalol: Results of a Nonrandomized Multicenter Study”

To the Editor:

Dr Jaeggi et al compared the efficacy and safety of digoxin, flecainide, and sotalol in fetal tachyarrhythmia. We would consider fetal tachycardia as an emergency, and our treatment of choice is a flecainide and digoxin combination from the outset. We have treated 27 fetuses with flecainide and digoxin combination to date; 6 exhibited atrial flutter (AF), and 21 had supraventricular tachycardia (SVT). Our approach resulted in survival of all fetuses, including 8 (27%) hydropic ones, with no intrauterine death. Twenty-six fetuses (96%) responded to flecainide and digoxin combination, with complete resolution of tachycardia in 22 (81.4%) and rate control in the other 4.2

The authors observed slower cardioversion rates in AF, fetal hydrops, and incessant arrhythmia, and the arrhythmia-related mortality was 17% in fetal hydrops.1 Fetal SVT and AF are most commonly accessory pathway-mediated arrhythmias.2,3 Digoxin as a single agent is not recommended to be used in SVT with accessory pathway because it blocks atrioventricular nodal conduction, and in the presence of an accessory pathway with AF or fibrillation, this might facilitate rapid antegrade conduction over the accessory pathway.4 Electrophysiologically it would be more desirable to block not only atrioventricular nodal, but also the accessory pathway conduction to achieve clinical response in fetal AF. In case of AF, flecainide without concomitant use of an atrioventricular blocking agent may slow the atrial rate just enough to cause 1:1 conduction over the atrioventricular node, hence resulting in faster ventricular response. Combination treatment with flecainide and digoxin or sotalol would be a logical choice in this respect. We can postulate that digoxin might also provide positive inotropic effect in hydropic fetuses, and its atrioventricular nodal blocking effect might negate potential side effects of flecainide in AF.

In our series, we evaluated fetal response time to flecainide and digoxin combination treatment. It was rather encouraging that the sinus rhythm was restored in mean of 4.85 days (range, 1–14 days) in fetuses with SVT. Although the fetal response time in AF was slightly longer with a mean of 10 days (range, 1–18 days), reassuringly all hydropic fetuses had complete resolution of ascites, pleural, and pericardial effusions with rate control. Resolution of hydrops may take as long as 2 weeks after normalization or reduction of fetal heart rate below 160 bpm.

Combination treatment was also well tolerated by pregnant women, and there was no serious toxicity requiring withdrawal of antiarrhythmic medication in our experience.2 The 2-drug combination undoubtedly is more useful in improving fetal hemodynamics by reduction of heart rate to a more tolerable range, or better, by restoring a normal rhythm.1,2,5 One must acknowledge that the risk of intrauterine death increases when fetal heart failure develops. To counteract such catastrophic end result, rapid restoration or control of fetal heart rate must be the primary objective. We certainly agree that, rather than insisting on monotherapy, prospective trials with antiarrhythmic combination treatment should be undertaken to reduce unacceptably high fetal death rate associated with SVT and hydrops.

Disclosures
None.

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References
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