

Is amiodarone a safe and effective alternative drug in persistent fetal tachycardia?

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Background – Persistent fetal tachycardias, especially when complicated with hydrops, are associated with a poor prognosis. If digoxin and flecaine are the usual first-line treatment but with inconstant results, amiodarone remains a last choice treatment because of its known complications.

Aims – In this retrospective study, we reviewed the use of amiodarone in patients with resistant fetal tachycardia, to determine the safety of this drug and its efficiency.

Methods - Between 1986 and 2012, 16 pregnancies admitted for fetal tachycardia were treated with amiodarone. 4 had atrial flutter and 12 had supra-ventricular tachycardia. The presentation was severe: 10 fetuses (63%) had hydrops and 2 (12.5%) had an isolated pericardial effusion. Amiodarone was never used as a first line therapy, but as a second line therapy in 6 fetuses and as a third line therapy in 6 fetuses.

Results - Amiodarone was given during 28.2 ± 15.3 days and was effective in 10 of the 16 (63%) patients (defined as resolution to sinus rhythm or slowing the tachycardia under 190 bpm), and despite the presence of hydrops (efficiency was obtained in 4/6 fetuses of the non hydropic group versus 6/10 of the hydrops group, $p=NS$). Among mothers, 2 complications were noticed: mild hypothyroidism and hepatic cytolysis. Hypothyroidism was present in 3 patients who did not require any substitutive treatment. Hepatic cytolysis was also present in 3 patients but never above 3 times normal level: therefore, none of them required amiodarone interruption. Fetuses were born at 35.8 ± 3.2 WA, weighed 2805 ± 579 g, and 5 of them required oral intubation at birth. One fetal death occurred (sinusal rhythm was obtained but hydrops with ventricular dysfunction persisted and a ventricular thrombus appeared). Hypothyroidism was present in 6 patients (including one goiter): 3 had transient hypothyroidism that resolved in 2 weeks, 2 were treated for 6 months and one is still treated. All children had normal neurological development.

Conclusion – Persistent tachycardias complicated with hydrops remain a medical challenge. Amiodarone seems to be a safe and efficient alternative drug in this indication.