Arytmie v těhotenství

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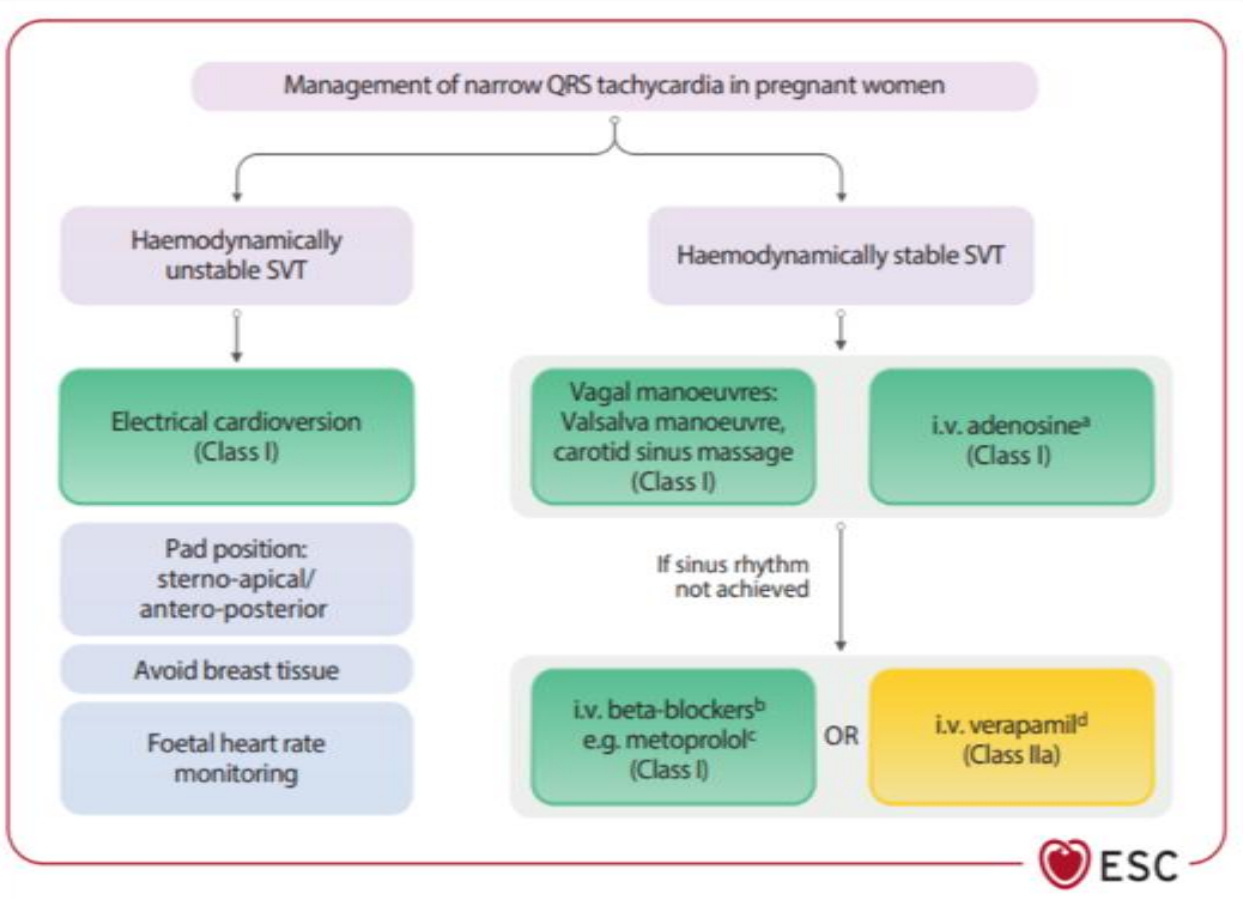
Management arytmií v těhotenství

Péče o ženy s vrozenými arytmickými syndromy

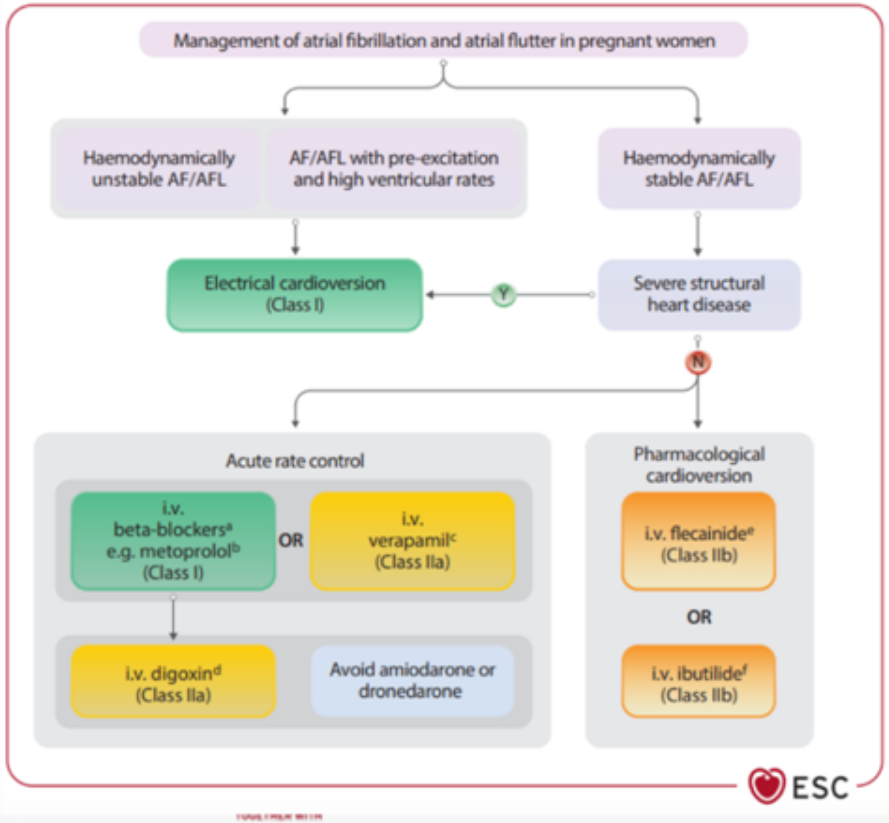
Arytmie v těhotenství

- nejčastější kardiovaskulární komplikace
  - benigní – časté
  - sinusová tachykardie, supraventrikulární tachykardie, extrasystoly
- život ohrožující – velmi vzácné
- velké riziko recidivy již známé arytmie
- nárůst výskytu fibrilace síní

Management of supraventricular arrhythmias during pregnancy: narrow QRS tachycardia



Management of supraventricular arrhythmias during pregnancy: atrial fibrillation/atrial flutter



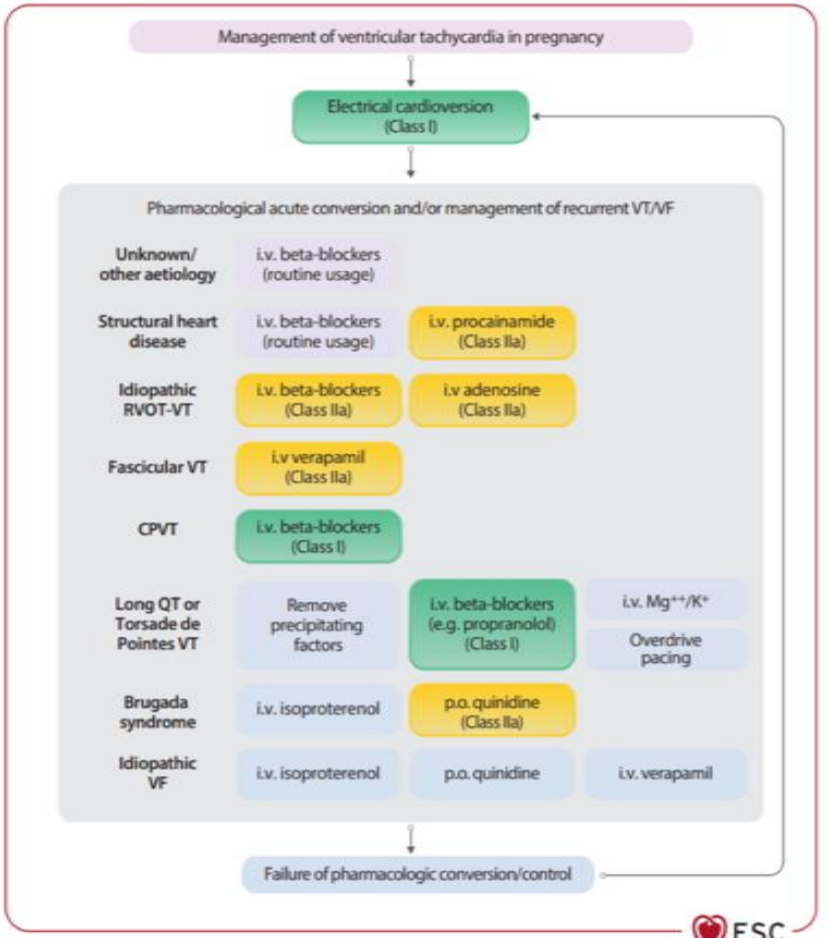
Recommendations	Class	Level
Intravenous beta-blockers (e.g. metoprolol) are recommended as the first-line option for acute rate control in pregnant women with AF or AF with preserved LVEF and rapid ventricular rate.	I	C
Intravenous digoxin or verapamil (if preserved LVEF) should be considered as a second-line option for initial rate control in pregnant women with AF or AFL and rapid ventricular rate.	IIa	C
Ibutilide or flecainide may be considered for termination of AF and AFL in pregnant women without structural heart disease.	IIb	C

Long-term management of supraventricular tachycardia and atrial fibrillation

Recommendations	Class	Level
Therapeutic anticoagulation with LMWH is recommended for pregnant women with persistent or permanent AF at elevated thromboembolic risk.	I	C
Beta-1-selective blockers are recommended for rate control in pregnant women with AF, AFL, or FAT.	I	C
Beta-1-selective blockers or verapamil are recommended for the prevention of SVT in women without pre-excitation on resting ECG.	I	C
Flecainide or propafenone are recommended for the prevention of arrhythmias in pregnant women with WPW syndrome.	I	C
Digoxin or verapamil should be considered for rate control in pregnant women with AF, AFL, or FAT when beta-blockers fail or are not tolerated.	IIa	C
Flecainide, in addition to beta-blockers, should be considered for long-term AF rhythm control in pregnancy.	IIa	C

Management of ventricular arrhythmias during pregnancy

- New-onset VT or VF arising during pregnancy are rare.
- The most common type is idiopathic VT originating from the right ventricular outflow tract (RVOT).
- When a new onset VT develops during the last 6 weeks of pregnancy or first month post-partum, a PPCM should be excluded.



Management arytmií v těhotenství

Péče o ženy s vrozenými arytmickými syndromy

Pregnancy in patients affected by inherited channelopathies and cardiomyopathies

- **Pre-pregnancy, women with inherited channelopathies and cardiomyopathies should be clinically evaluated to optimize treatment, avoid contraindicated drugs, and assess the risk of heart failure (cardiomyopathies) and arrhythmias.**

- **Indicated procedures, including implantable cardioverter defibrillator (ICD) implantation, left cardiac sympathetic denervation, septal reduction therapy, should be performed before pregnancy.**

- **Genetic counselling is recommended before pregnancy to explain the probability of genetic transmission, risks for the mother, foetus, and child, and the possibilities of pre-implantation and prenatal genetic testing.**

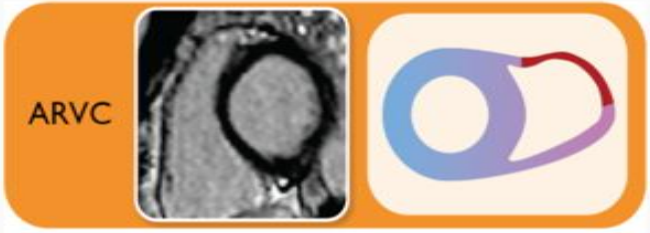
Pregnancy in patients affected by inherited channelopathies and cardiomyopathies

Section 6 has been expanded since 2018 for advice in specific cardiomyopathies and primary arrhythmias

mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II–III	mWHO 2.0 III	mWHO 2.0 IV
		Arrhythmias		
Atrial or ventricular ectopic beats, isolated	Most supraventricular arrhythmias	Low-risk LQTS: no previous events + on full dose beta-blocker therapy	Sustained ventricular tachycardia from any aetiology	
	Bradycardia requiring pacemaker	Low-risk CPVT: well controlled by medical therapy BrS with no previous events	LQT2 (post-partum) Symptomatic CPVT and LQTS not adequately controlled by therapy BrS with previous events	

Pregnancy in patients affected by inherited channelopathies and cardiomyopathies

mWHO 2.0 I	mWHO 2.0 II	mWHO 2.0 II–III	mWHO 2.0 III	mWHO 2.0 IV
		Cardiomyopathy		
HCM: genotype-positive + phenotype-negative		Low-risk ARVC: genotype-positive + no or mild phenotype HCM without complications DCM/NDLVC with normal or mild left ventricular impairment: EF >45%	ARVC with moderate/severe disease HCM with arrhythmic and/or moderate haemodynamic complications DCM/NDLVC with moderate left ventricular impairment: EF 30%–45%	DCM/NDLVC with severe left ventricular impairment: EF <30% or NYHA class III/IV HCM with symptomatic severe outflow tract obstruction: ≥50 mmHg HCM with severely symptomatic LV dysfunction (EF <50%)



Arrhythmogenic Right Ventricular Cardiomyopathy

- **Several observational studies and registries have shown that pregnancies in women with arrhythmogenic right ventricular cardiomyopathy (ARVC) are generally well tolerated with good foetal outcomes and no cardiac mortality when receiving optimal surveillance and therapy**
- **Beta-blocker therapy should be continued during pregnancy (with the exception of atenolol) or could be started in pregnancy if needed.**

Recommendation	Class	Level
Flecainide, in addition to beta-blockers, should be considered as the antiarrhythmic drug of choice in pregnant women with ARVC.	IIa	C
Sotalol may be considered as an antiarrhythmic drug in pregnant women with ARVC, with careful evaluation of QTc and while monitoring for foetal bradycardia and foetal growth and neonate hypoglycaemia.	IIb	C

Pregnancy in patients affected by channelopathies

- **Labour and delivery may be associated with acute pain, adrenaline release, and urgent administration of anaesthetic drugs, and therefore continuous telemetry monitoring is often warranted.**
- **In the absence of obstetric contraindications, vaginal delivery is generally recommended.**

Recommendation	Class	Level
Monitoring and treatment of hypokalaemia and hypomagnesaemia is recommended in pregnant women with primary arrhythmia syndromes suffering from hyperemesis.	I	C

Long QT Syndrome

Recommendations	Class	Level
Beta-blockers, with pre-pregnancy dose and with nadolol and propranolol as drugs of choice, are recommended during pregnancy in women with LQTS.	I	B
It is recommended to continue beta-blocker therapy during lactation in women with LQTS to reduce arrhythmic risk.	I	B
Pre-pregnancy beta-blocker dose of nadolol or propranolol, is recommended in women with LQT2, particularly in the post-partum period, which represents a high-risk period for life-threatening arrhythmias.	I	B
In women carrying a LQTS P/LP variant and who are phenotype-negative, use of beta-blockers during pregnancy, post-partum, and lactation should be considered.	IIa	C
Left cardiac sympathetic denervation should be considered before pregnancy in high-risk woman with LQTS who are not adequately protected by pharmacological therapies or who have appropriate ICD shocks despite optimal medical therapy.	IIa	C

Závěrem

- Většina arytmií v těhotenství je benigních
- Závažné arytmie jsou v těhotenství velmi vzácné, ale mohou mít pro matku i plod fatální důsledky.
- Podávání betablokátorů, digoxinu i adenosinu je v těhotenství bezpečné.
- Invazivní zákroky u známých arytmií je vhodné provést před plánovaným těhotenstvím.
- Léčba matky má přednost před ochranou plodu.