SÚSCCH a.s.

6. – 8. listopadu 2016, Clarion Hotel Olomouc
XIV
ČESKÉ A SLOVENSKÉ SYMPOZIUM O ARYTMIÍCH A KARDIOSTIMULACI

Novinky v 2016 ESC odporúčaniach pre manažment FP

stručný prehľad

MUDr. Adrian Bystriansky

Stredoslovenský ústav srdcových
a cievnych chorôb, a.s. Banská Bystrica

Deklarácia konfliktu záujmov

prednášky pre farmaceutické a nefarmaceutické spoločnosti

- Bayer, Boehringer-Ingelheim, Pfizer, Merck, Meditrade, Medtronic, Operativa

konzultant farmaceutických spoločností

- Bayer

člen Advisory Board farmaceutických spoločností

- Bayer, Boehringer-Ingelheim

MUDr. Adrian Bystriansky

2016 ESC odporúčania o FP

European Heart Journal Advance Access published August 27, 2016

European Heart Journal
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ESC GUIDELINES

2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS

The Task Force for the management of atrial fibrillation of the European Society of Cardiology (ESC)

Developed with the special contribution of the European Heart Rhythm Association (EHRA) of the ESC

Endorsed by the European Stroke Organisation (ESO)

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- „nový“ dokument
- 90 strán, 1042 citácií
- 154 odporúčaní

154 recommendations		
Class I	48	31%
Class IIa	75	49%
Class IIb	18	12%
Class III	13	8%

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

ESC odporúčania o FP

European Heart Journal (2010) **31**, 2369–2429
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ESC GUIDELINES

Guidelines for the management of atrial fibrillation

The Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC)

Developed with the special contribution of the European Heart Rhythm Association (EHRA)†

Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS)

Authors/Task Force Members: A. John Camm (Chairperson) (UK)*, Paulus Kirchhof (Germany), Gregory Y.H. Lip (UK), Ulrich Schotten (The Netherlands), Irene Savelieva (UK), Sabine Ernst (UK), Isabelle C. Van Gelder (The Netherlands), Nawwar Al-Attar (France), Gerhard Hindricks (Germany), Bernard Prendergast (UK), Hein Heidbuchel (Belgium), Ottavio Alfieri (Italy), Annalisa Angelini (Italy), Dan Atar (Norway), Paolo Colonna (Italy), Raffaele De Caterina (Italy),

European Heart Journal (2012) **33**, 2719–2747
doi:10.1093/eurheartj/ehs253

ESC GUIDELINES

2012 focused update of the ESC Guidelines for the management of atrial fibrillation

An update of the 2010 ESC Guidelines for the management of atrial fibrillation
Developed with the special contribution of the European Heart Rhythm Association

Authors/Task Force Members: A. John Camm (Chairperson) (UK)*, Gregory Y.H. Lip (UK), Raffaele De Caterina (Italy), Irene Savelieva (UK), Dan Atar (Norway), Stefan H. Hohnloser (Germany), Gerhard Hindricks (Germany), Paulus Kirchhof (UK)

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ESC GUIDELINES

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- zmena autorského kolektívu

Timeline míľnikov EBM o FP

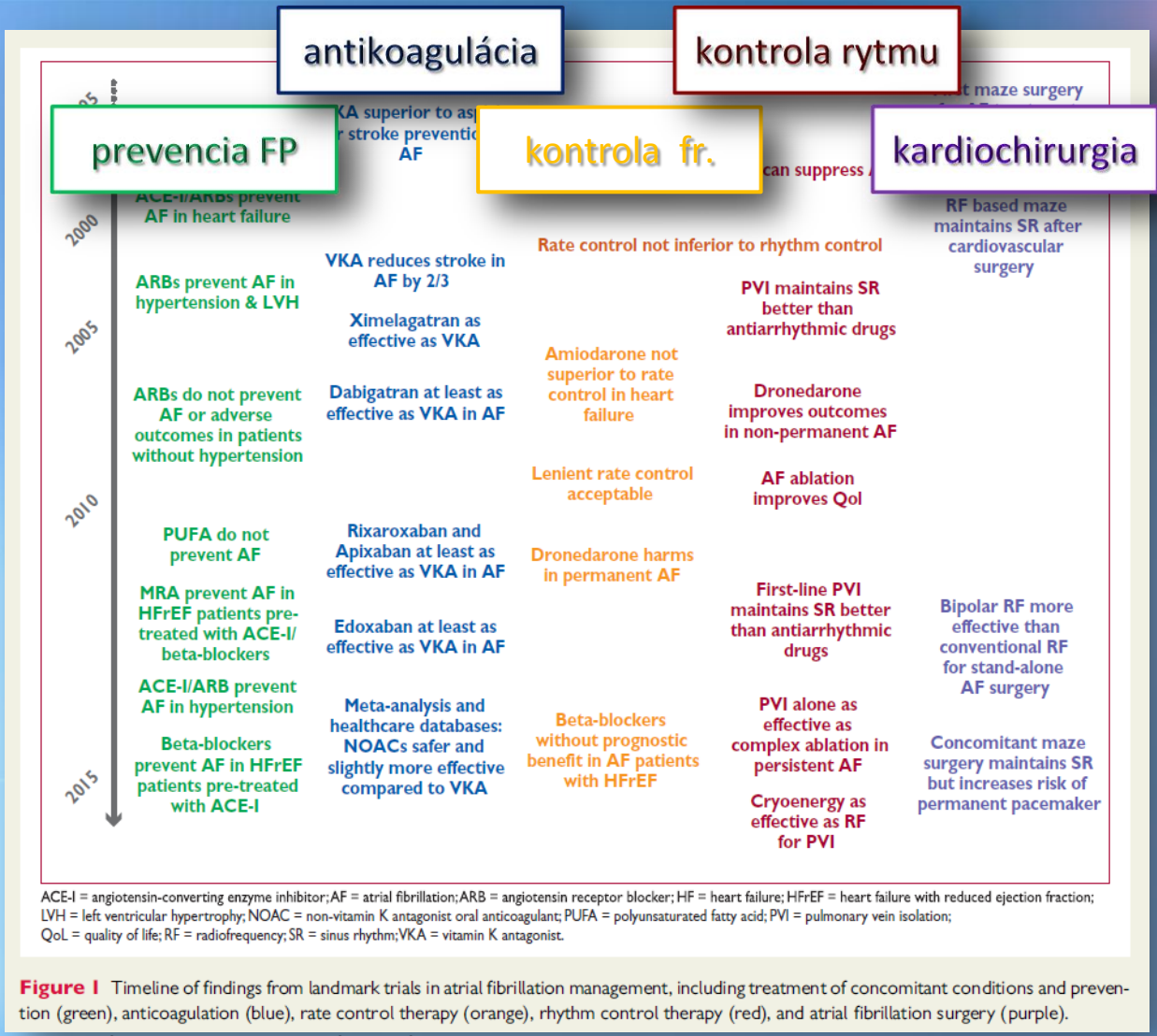


Figure 1 Timeline of findings from landmark trials in atrial fibrillation management, including treatment of concomitant conditions and prevention (green), anticoagulation (blue), rate control therapy (orange), rhythm control therapy (red), and atrial fibrillation surgery (purple).

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Skríning fibrilácie predsiení

> 65 rokov: pulz. fr., EKG

po TIA/NCMP: 72 h. EKG

s KS/ICD ☛ **AHRE**

po NCMP: dlhodobé EKG
- ILR na detekciu silent FP

systematický screening:
- > 75 rokov
- s vysokým TE rizikom

Recommendations for screening for atrial fibrillation

Recommendations	Class[a]	Level[b]	Ref[c]
	I	B	130, 134, 155
	I	B	27, 127
It is recommended to interrogate … therapy.	I	B	141, 156
… to document silent atrial fibrillation.	IIa	B	18, 128
	IIb	B	130, 135, 157

… rate episodes;
ECG = electrocardiogram; ICD = implantable cardioverter defibrillator;
TIA = transient ischaemic attack.
[a]Class of recommendation.
[b]Level of evidence.
[c]Reference(s) supporting recommendations.

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Pacienti s KS/ICD: AHRE

AHRE ☛ epizódy s vysokou frekvenciou predsiení (KS/ICD)

- **AHRE ≠ FP**
- AHRE ⬆ **riziko FP** (5,6x)
- AHRE ⬆ **riziko NCMP** (2,5x)
- klinický výskum (RKŠ):
  - ARTESiA, NOAH – AFNET 6

…cted in 10–15% of pacemaker patients.[141] AHRE are associated … an increased risk of overt AF [hazard ratio (HR) 5.56; 95% con-…nce interval (CI) 3.78–8.17; $P < 0.001$] and ischaemic stroke or …emic embolism (HR 2.49; 95% CI 1.28–4.85; $P = 0.007$). The …ke risk in AHRE patients seems lower than the stroke risk in pa-…s with diagnosed AF, and not all AHRE represent AF.[142] Strokes …n occur without AHRE detected within 30 days before the …t.[143–147] Consequently, it is unclear whether AHRE imply the …e therapeutic requirements as overt AF,[148] and the benefit of …C in patients with AHRE is tested in ongoing clinical trials [e.g. …xaban for the Reduction of Thrombo-Embolism in Patients With …ice-Detected Sub-Clinical Atrial Fibrillation (ARTESiA) …T01938248) and *N*on vitamin K antagonist *O*ral anticoagulants …

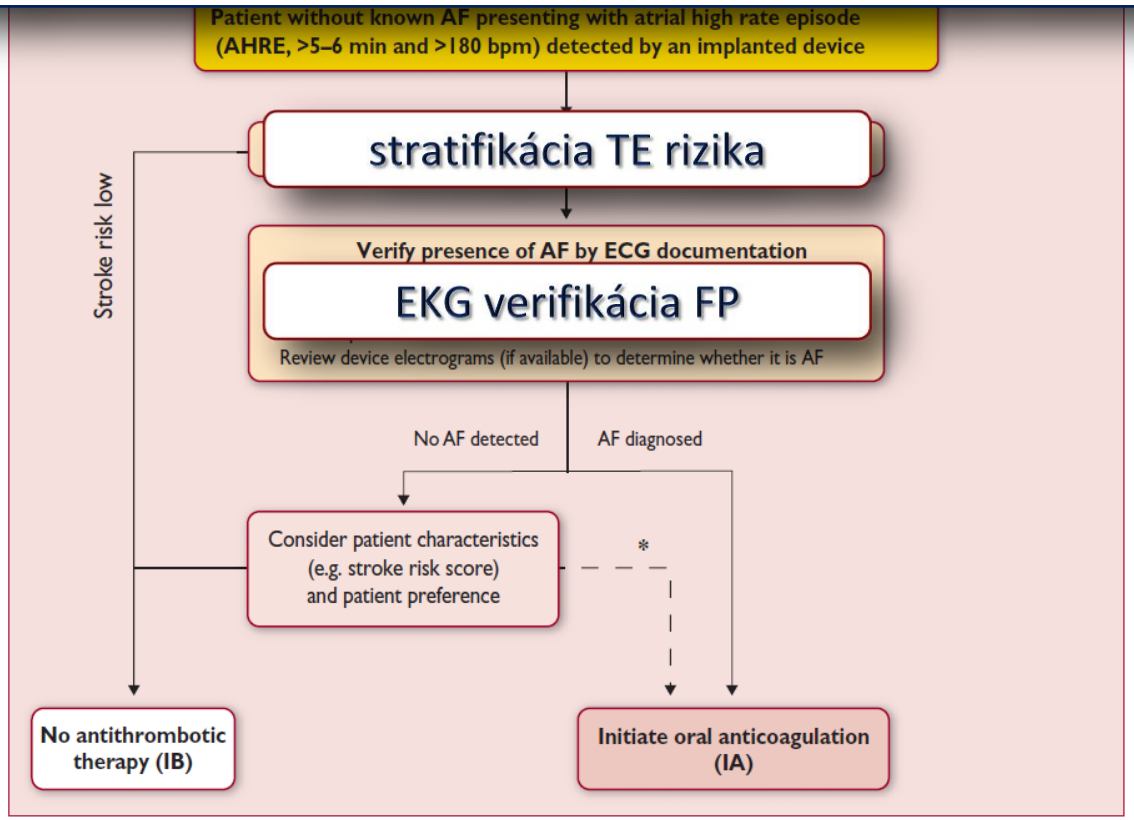
…implanted pacemakers or defibrillators with an atrial lead allow continuous monitoring of atrial rhythm. Using this technology, patients with atrial high rate episodes (AHRE) can be identified. Depending on the risk profile of the population studied, such AHRE are

It is recommended to interrogate pacemakers and ICDs on a regular basis for atrial high rate episodes (AHRE). Patients with AHRE should undergo further ECG monitoring to document AF before initiating AF therapy.	I	B	141, 156

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

AHRE ≠ FP

AHRE ☛ epizódy s vysokou frekvenciou predsiení (KS/ICD)



AF = atrial fibrillation; AFNET = German Competence NETwork on Atrial Fibrillation; AHRE = atrial high rate episodes; bpm = beats per minute; CHA_2DS_2-VASc = Congestive Heart failure, hypertension, Age ≥75 (doubled), Diabetes, Stroke (doubled), Vascular disease, Age 65–74, and Sex (female); ECG = electrocardiogram; EHRA = European Heart Rhythm Association.

*In rare individual circumstances, oral anticoagulation may be considered in patients with AHRE, but without diagnosed AF. This clearly needs discussion with the patient and careful evaluation of perceived benefit and risk.

[a]Adapted from the report of the 3rd AFNET/EHRA consensus conference.[150]

Figure 3 Management of AHRE detected by an implanted device. Adapted from the report of the 3rd AFNET/EHRA consensus conference.[150]

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Klasifikácia fibrilácie predsiení

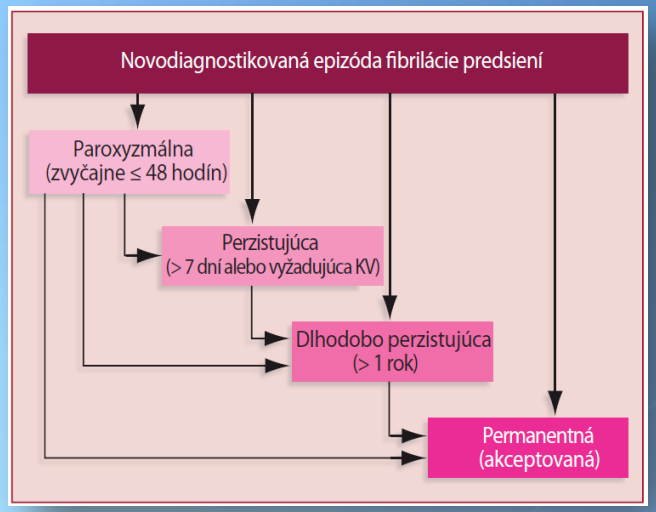


Table 5 Patterns of atrial fibrillation

AF pattern	Definition
First diagnosed AF	AF that has not been diagnosed before, irrespective of the duration of the arrhythmia or the presence and severity of AF-related symptoms.
Paroxysmal AF	
Persistent AF	
Long-standing persistent AF	Continuous AF lasting for ≥1 year when it is decided to adopt a rhythm control strategy.
Permanent AF	AF that is accepted by the patient (and physician). Hence, rhythm control interventions are, by definition, not pursued in patients with permanent AF. Should a rhythm control strategy be adopted, the arrhythmia would be re-classified as 'long-standing persistent AF'.

spontánne terminujúca FP ≤ 48 hod.

- niektoré parox. FP môžu pokračovať **až 7 dní**

FP terminovaná kardioverziou < 7 dní

FP trvá > 7 dní, vrátane epizód **terminovaných kardioverziou > 7 dní**

- farmakologicky alebo EKV

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Symptomatológia FP (EHRA)

Klasifikácia symptómov spojených s FP (podľa EHRA)	
EHRA I	Žiadne symptómy
EHRA II	Mierne symptómy: bežné
EHRA III	Závažné symptómy: bežn
EHRA IV	Invalidizujúce symptómy

Table 7 Modified European Heart Rhythm Association symptom scale (modified from Wynn et al.[199])

Modified EHRA score	Symptoms	Description
I	None	AF does not cause any symptoms
2a	Mild	Normal daily activity not affected by symptoms related to AF[a]
2b	Moderate	Normal daily activity not affected by symptoms related to AF, but patient troubled by symptoms[a]
3	Severe	Normal daily activity affected by symptoms related to AF
4	Disabling	Normal daily activity discontinued

Recommendation on use of the modified European Heart Rhythm Association symptom scale

Recommendation	Class[a]	Level[b]	Ref[c]
Use of the modified EHRA symptom scale is recommended in clinical practice and research studies to quantify AF-related symptoms.	I	C	192, 199

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Manažment pacienta s FP (2016)

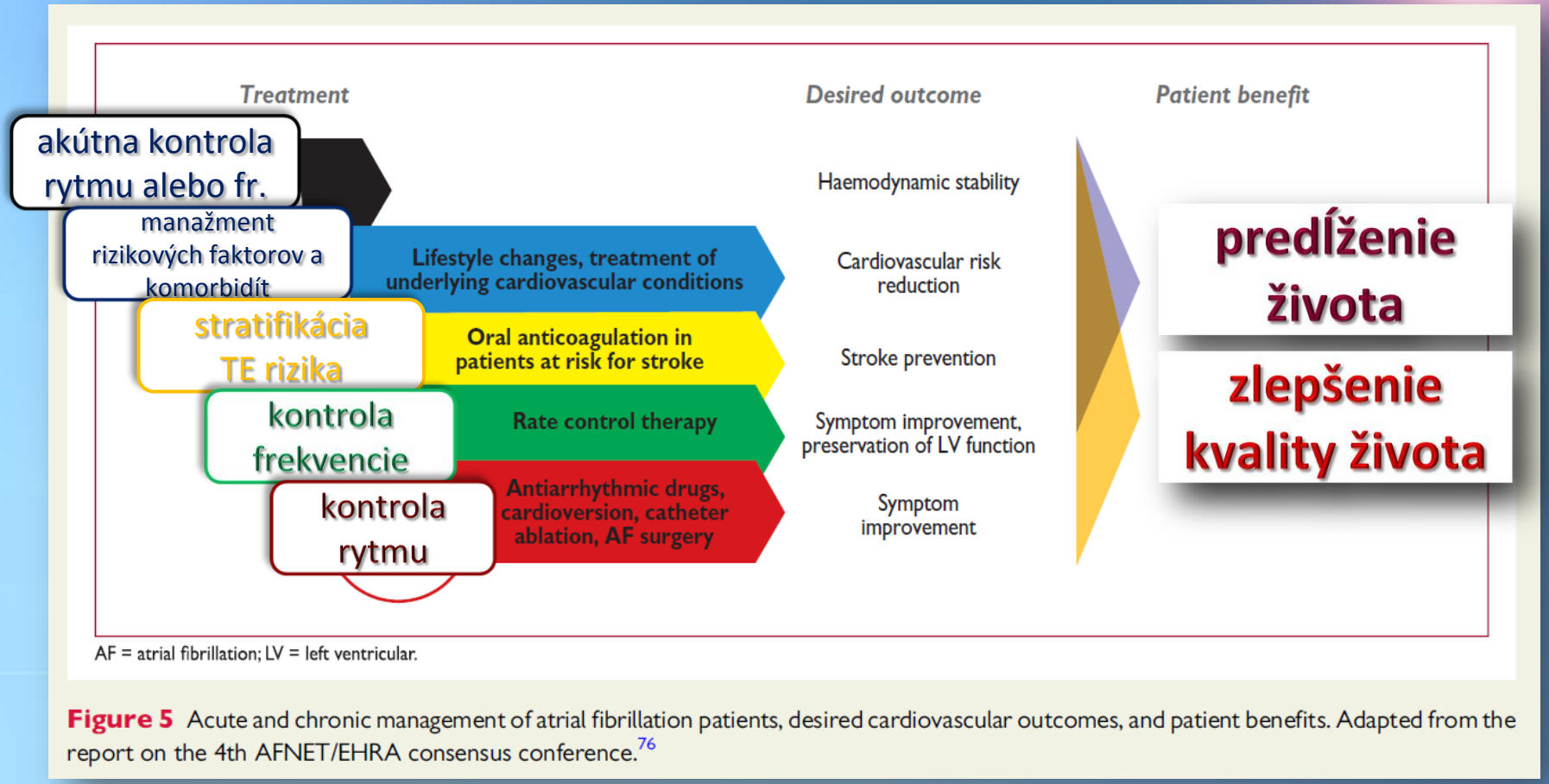
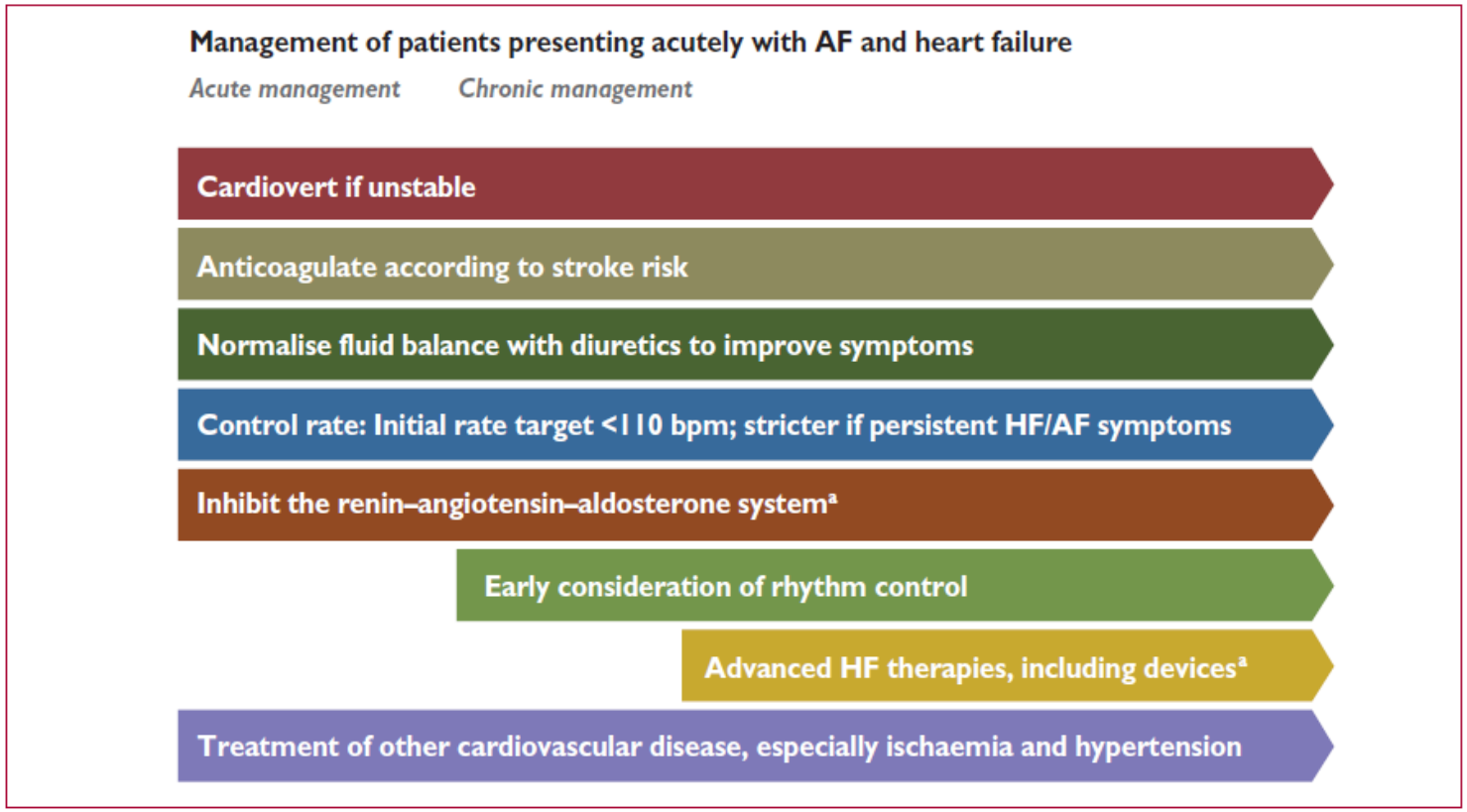


Figure 5 Acute and chronic management of atrial fibrillation patients, desired cardiovascular outcomes, and patient benefits. Adapted from the report on the 4th AFNET/EHRA consensus conference.[76]

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

FP a srdcové zlyhávanie



ACE = angiotensin-converting enzyme; AF = atrial fibrillation; ARB = angiotensin receptor blocker; ARNI = angiotensin receptor neprilysin inhibition; bpm = beats per minute; HF = heart failure.
[a]In patients with heart failure and reduced ejection fraction. Also consider combined ARNI in patients able to tolerate an ACE inhibitor or ARB with ongoing symptoms.
*Adapted from Kotecha and Piccini.[218]

Figure 4 Initial management of newly diagnosed concomitant heart failure and AF. Adapted from Kotecha and Piccini.[218]

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

European Heart Journal Advance Access published September 28, 2015

European Heart Journal
doi:10.1093/eurheartj/ehv513

REVIEW

Controversies in cardiovascular medicine

Atrial fibrillation in heart failure: what should we do?

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Received 6 July 2015; revised 25 August 2015; accepted 7 September 2015

FP a srdcové zlyhávanie

CAN-TREAT HFrEF+AF

Management of newly diagnosed concommitant heart failure with reduced ejection fraction and atrial fibrillation

- **C** Cardioversion — if signs of haemodynamic compromise
- **A** Anticoagulation — unless absolute contraindication
- **N** Normalise fluid balance — diuretics to control signs and symptoms of failure
- **T** Target initial heart rate <110 bpm — consider stricter control if persistent symptoms
- **R** Renin-angiotensin-aldosterone system — ACEi/ARB/mineralocorticoid receptor antagonists
- **E** Early consideration of rhythm control — amiodarone/cardioversion and ablation
- **A** Advanced heart failure therapies — resynchronization/defibrillator/mechanical support
- **T** Treatment of other CV disease — control of ischaemia and hypertension

Patient-centred approach

Diagnosis/management of non-CV comorbidities, including diabetes, renal dysfunction, anaemia and airways disease

Education and support

- kardioverzia
- antikoagulácia
- th. kongescie
- kontrola prevodu
- blokáda RAAS
- kontrola rytmu
- liečba SZ
- th. základného KVO

Praktický postup vyš. pacienta s FP

EKG dokumentácia FP

klinické vyšetrenie

ECHO KG vyšetrenie

EKG monitorovanie

Recommendations for diagnostic workup of atrial fibrillation patients

Recommendations	Class[a]	Level[b]	Ref[c]
ECG documentation is required to establish the diagnosis of AF.	I	B	349
A full cardiovascular evaluation, including an accurate history, careful clinical examination, and assessment of concomitant conditions, is recommended in all AF patients.	I	C	
Transthoracic echocardiography is recommended in all AF patients to guide management.	I	C	339
Long-term ECG monitoring should be considered in selected patients to assess the adequacy of rate control in symptomatic patients and to relate symptoms with AF episodes.	IIa	C	

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Stratifikácia rizika: TE vs. krvácanie

CHA_2DS_2-VASc

prediction of stroke and

Recommendations	Class[a]	Level[b]	Ref[c]
The CHA_2DS_2-VASc score is recommended for stroke risk prediction in patients with AF.	I	A	368, 371, 386
Bleeding risk scores should be considered in AF patients on oral anticoagulation to identify modifiable risk factors for major bleeding.	IIa	B	384, 386, 387, 389–392
Biomarkers such as high-sensitivity troponin and natriuretic peptide may be considered to further refine stroke and bleeding risk in AF patients.	IIb	B	380–382, 387, 393

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Indikácia antikoagulačnej th. pri FP

indikovaná antikoagulačná liečba (IA)

9 ↕ 2

- zváž. OAK (IIaB) — 1
- bez liečby — 0

Riziková stratifikácia CHA_2DS_2-VAS_c		
Rizikový faktor		Skóre
C		1
H		1
A_2		2
D		1
S_2		2
V		1
A		1
S_c		1

prvá epizóda fibrilácia predsiení

paroxyzmálna fibrilácia predsiení

perzistujúca fibrilácia predsiení

permanentná fibrilácia predsiení

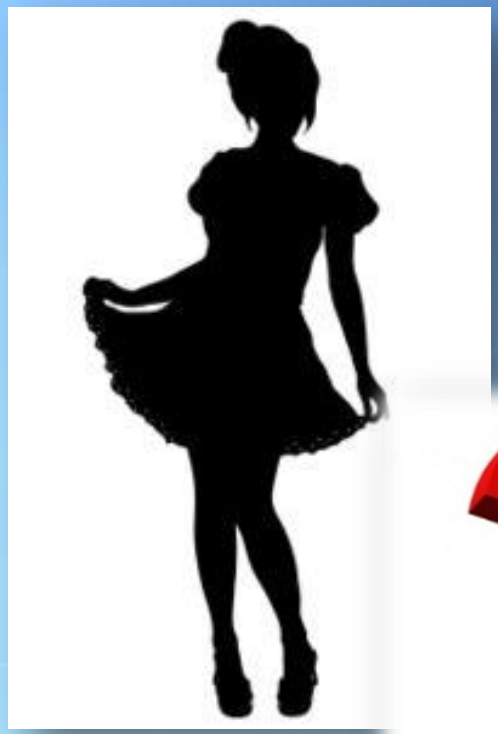
Indikácia antikoagulačnej th. pri FP

indikovaná antikoagulačná liečba (IA)	9 ⇕ 3
• zváž. OAK (IIaB)	2
• bez liečby	1
• pre ženy neexistuje	0

Riziková stratifikácia CHA_2DS_2-VAS_c	
Rizikový faktor	Skóre
C	1
H	1
A_2	2
D	1
S_2	2
V	1
A	1
S_c	1

prvá epizóda fibrilácia predsiení	**paroxyzmálna** fibrilácia predsiení	**perzistujúca** fibrilácia predsiení	**permanentná** fibrilácia predsiení

Stratifikácia TE rizika pri FP (2016)



Riziková stratifikácia CHA_2DS_2-VAS_c		
Rizikový faktor		Skóre
C	***srdcové zlyhanie***	1
H	***hypertenzia***	1
A_2	***vek nad 75 rokov***	2
D	***diabetes mellitus***	1
S_2	***st. p. CMP alebo TIA***	2
V	***vaskulárne ochorenie***	1
A	***vek 65 – 74 rokov***	1
S_c	***ženské pohlavie***	1

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

Antikoagulačná liečba FP

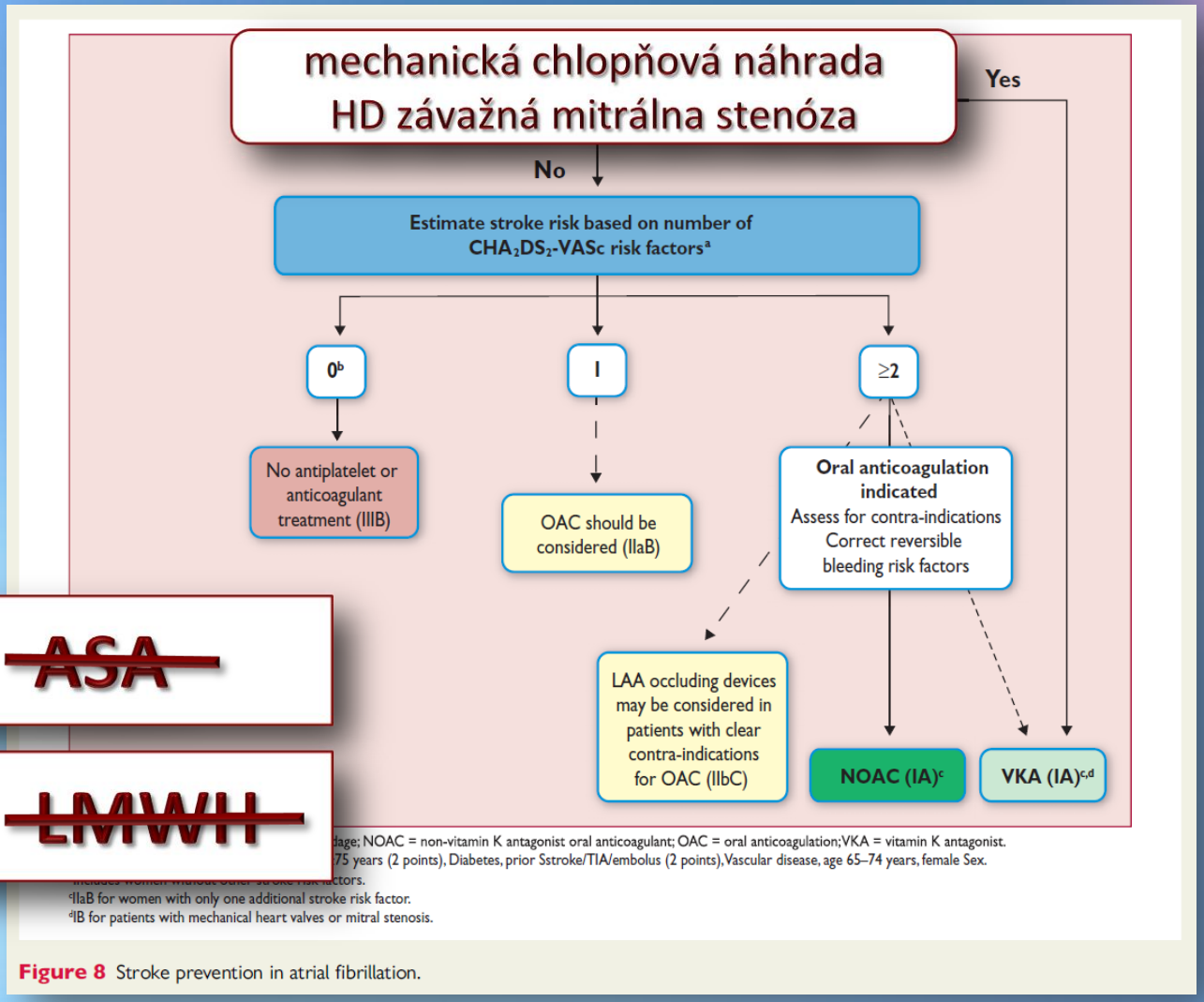


Figure 8 Stroke prevention in atrial fibrillation.

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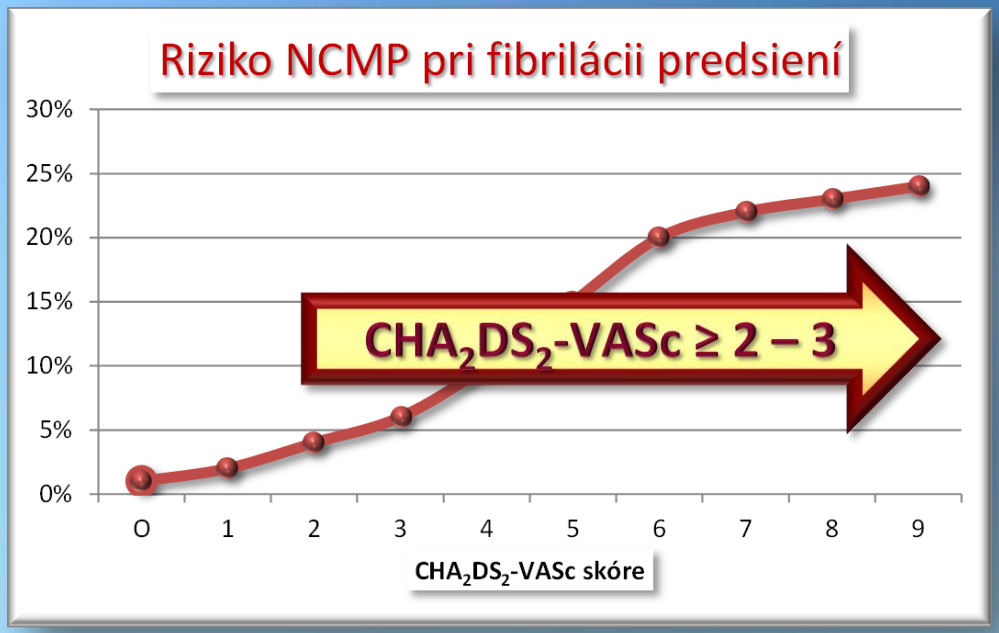
Stratifikácia TE rizika pri FP (2016)



- **CHA_2DS_2-VASc ≥ 2-3 ☛ antikoagulačná liečba**
  - **NOAK by mali byť preferované** pred warfarinom

Riziková stratifikácia CHA_2DS_2-VAS_c		
Rizikový faktor		Skóre
C	*srdcové zlyhanie*	1
H	*hypertenzia*	1
A_2	*vek nad 75 rokov*	2
D	*diabetes mellitus*	1
S_2	*st. p. CMP alebo TIA*	2
V	*vaskulárne ochorenie*	1
A	*vek 65 – 74 rokov*	1
S_c	*ženské pohlavie*	1

Kirchhof, P. et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. European Heart Journal Aug 2016, online.

2016 ESC o FP: Antikoagulačná liečba

Recommendations for stroke prevention in patients with atrial fibrillation

Recommendations	Class[a]	Level[b]	Ref[c]
• OAK u mužov s CHA_2DS_2-VASc ≥ 2	I	A	38, 318–321, 354, 404
• OAK u žien s CHA_2DS_2-VASc ≥ 3	I	A	38, 318–321, 354, 404
• OAK u mužov s CHA_2DS_2-VASc = 1	IIa	B	371, 375–377
• OAK u žien s CHA_2DS_2-VASc = 2	IIa	B	371, 376, 377
• VKA: mech. chlopňové náhrady, mitr. stenóza	I	B	274, 435–440
• pri OAK sa odporúča preferovať NOAK	I	A	39, 318–321, 404
When patients are treated with a vitamin K antagonist, time in therapeutic range (TTR) should be kept as high as possible and closely monitored.	I	A	395, 432, 441-444
AF patients already on treatment with a vitamin K antagonist may be considered for NOAC treatment if TTR is not well controlled despite good adherence, or if patient preference without contra-indications to NOAC (e.g. prosthetic valve).	IIb	A	39, 318, 319, 404, 408
Combinations of oral anticoagulants and platelet inhibitors increase bleeding risk and should be avoided in AF patients without another indication for platelet inhibition.	III (harm)	B	429, 445
In male or female AF patients without additional stroke risk factors, anticoagulant or antiplatelet therapy is not recommended for stroke prevention.	III (harm)	B	368, 371, 376, 377
• antiagregačná th. sa NEodporúča	III (harm)	A	38, 429, 430
NOACs (apixaban, dabigatran, edoxaban, and rivaroxaban) are not recommended in patients with mechanical heart valves (Level of evidence B) or moderate-to-severe mitral stenosis (Level of evidence C).	III (harm)	B C	318–321, 400, 404

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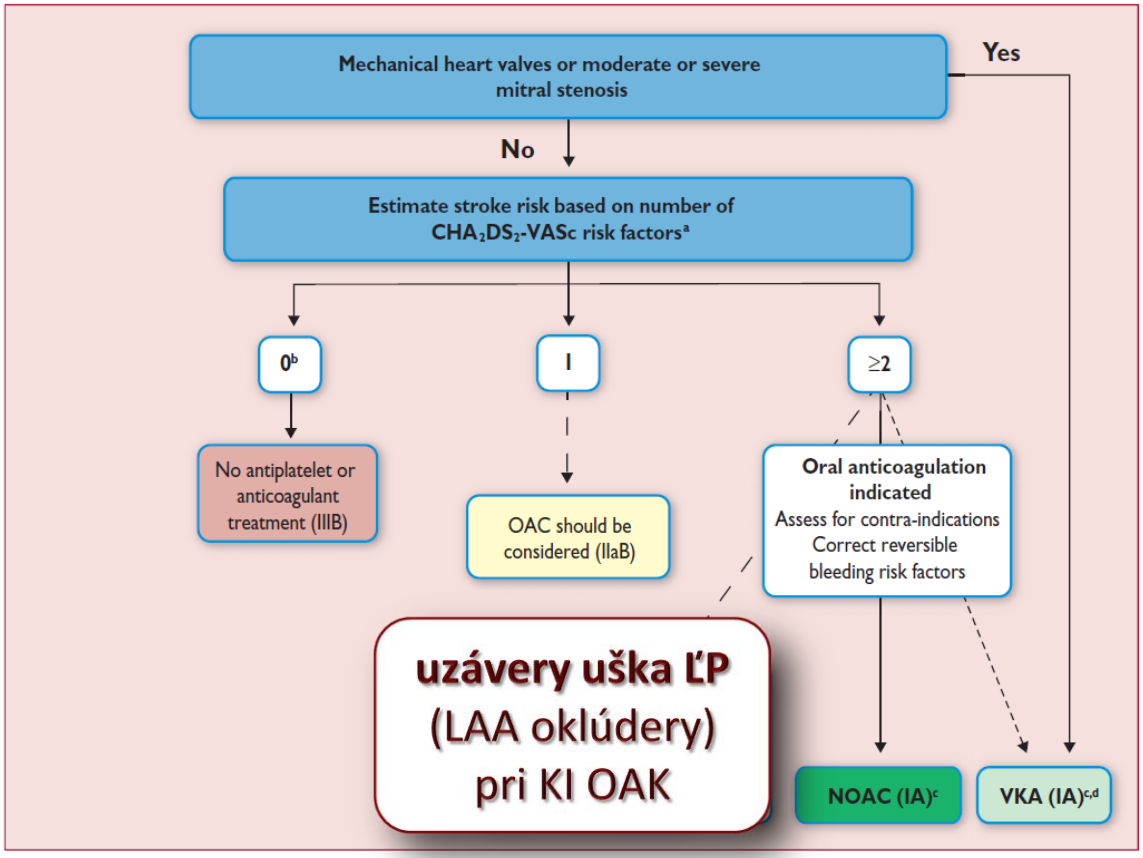
Nefarmakologická prevencia TE



AF = atrial fibrillation; LAA = left atrial appendage; NOAC = non-vitamin K antagonist oral anticoagulant; OAC = oral anticoagulation; VKA = vitamin K antagonist.
[a]Congestive heart failure, Hypertension, Age ≥75 years (2 points), Diabetes, prior Sstroke/TIA/embolus (2 points), Vascular disease, age 65–74 years, female Sex.
[b]Includes women without other stroke risk factors.
[c]IIaB for women with only one additional stroke risk factor.
[d]IB for patients with mechanical heart valves or mitral stenosis.

Figure 8 Stroke prevention in atrial fibrillation.

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Stratifikácia rizika: TE vs. krvácanie

CHA_2DS_2-VASc

HAS-BLED

identifikácia modifikovateľných rizikových faktorov krvácania

predict

Recommendations	Class		
The CHA_2DS_2-VASc score is recommended for stroke risk prediction in patients with AF.	I		
Bleeding risk scores should be considered in AF patients on oral anticoagulation to identify modifiable risk factors for major bleeding.	IIa		
Biomarkers such as high-sensitivity troponin and natriuretic peptide may be considered to further refine stroke and bleeding risk in AF patients.	IIb	B	380–382, 387, 393

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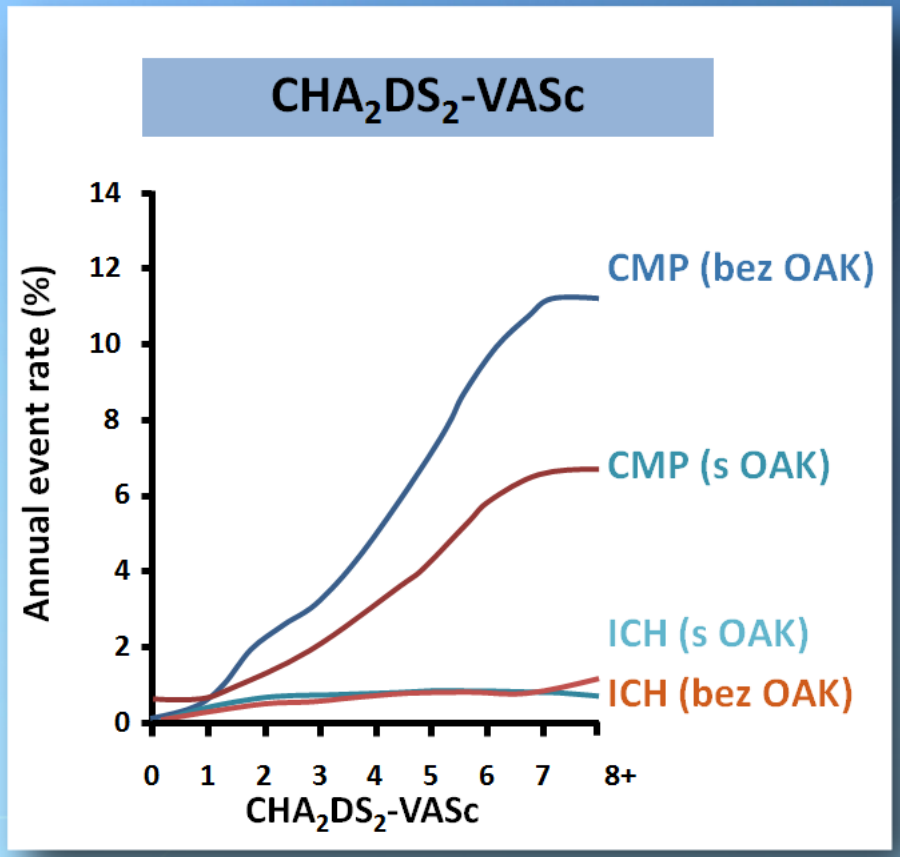
Reálne riziko TE vs. krvácanie



Kohorta 159 013 švédskych pacientov liečených antikoagulanciami sledovaných 1.5±1.1 roku (2005–2008)

Friberg et al. Circulation. 2012;125:2298–2307.

Rizikové faktory krvácania

- HAS-BLED score
- HEMORR2HAGES score
- ATRIA score
- ORBIT score
- ABC bleeding score

- **hypertenzia**
- labilné INR
- **ko-medikácia**
- **exces alkoholu**
- anémia
- renálne funkcie
- hepatálne funkcie

nemodifikovateľné RF
- vek
- anamnéza krvácania
- prekonaná NCMP
- CHOO, dialýza
- onkologické ochorenie
- genetické faktory

Table 12 Modifiable and non-modifiable risk factors for bleeding in anticoagulated patients based on bleeding risk scores

• modifikovateľné RF
Hypertension (especially when systolic blood pressure is >160 mmHg)[a,b,c]
Labile INR or time in therapeutic range <60%[a] in patients on vitamin K antagonists
Medication predisposing to bleeding, such as antiplatelet drugs and non-steroidal anti-inflammatoy drugs[a,d]
Excess alcohol (>8 drinks/week)[a,b]
• relat. modifikovateľné RF
Anaemia[b,c,d]
Impaired renal function[a,b,c,d]
Impaired liver function[a,b]
Reduced platelet count or function[b]
Age[e] (>65 years)[a] (≥75 years)[b,c,d]
History of major bleeding[a,b,c,d]
Previous stroke[a,b]
Dialysis-dependent kidney disease or renal transplant[a,c]
Cirrhotic liver disease[a]
Malignancy[b]
Genetic factors[b]
Biomarker-based bleeding risk factors
High-sensitivity troponin[e]
Growth differentiation factor-15[e]
Serum creatinine/estimated CrCl[e]

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Kedy kontrolovať renálne funkcie ?

- **ako často** kontrolovať **renálne parametre**

ChOO I – II. št.	eGRF > 60 ml/min.	min. 1x / 12 mesiacov
ChOO III. št.	eGRF = 30 - 59 ml/min.	min. 1x / 6 mesiacov
ChOO IV. št.	eGRF < 30 ml/min.	min. 1x / 3 mesiace

- **pri každej akútnej zmene klinického stavu**

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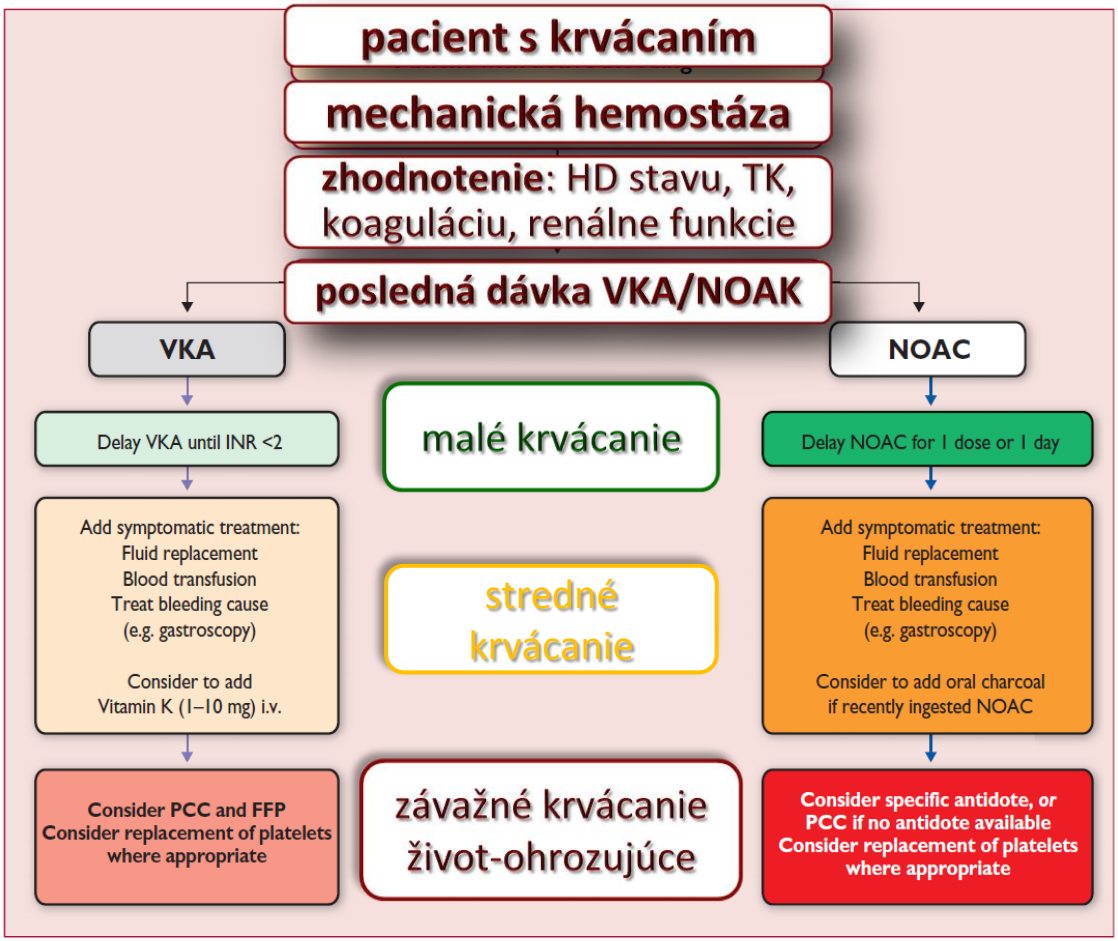
Manažment aktívneho krvácania



FFP = fresh frozen plasma; INR = international normalized ratio; i.v. = intravenous; NOAC = non-vitamin K antagonist oral anticoagulant; OAC = oral anticoagulation; PCC = prothrombin complex concentrates; VKA = vitamin K antagonist.

Figure 11 Management of active bleeding in patients receiving anticoagulation. Institutions should have an agreed procedure in place.

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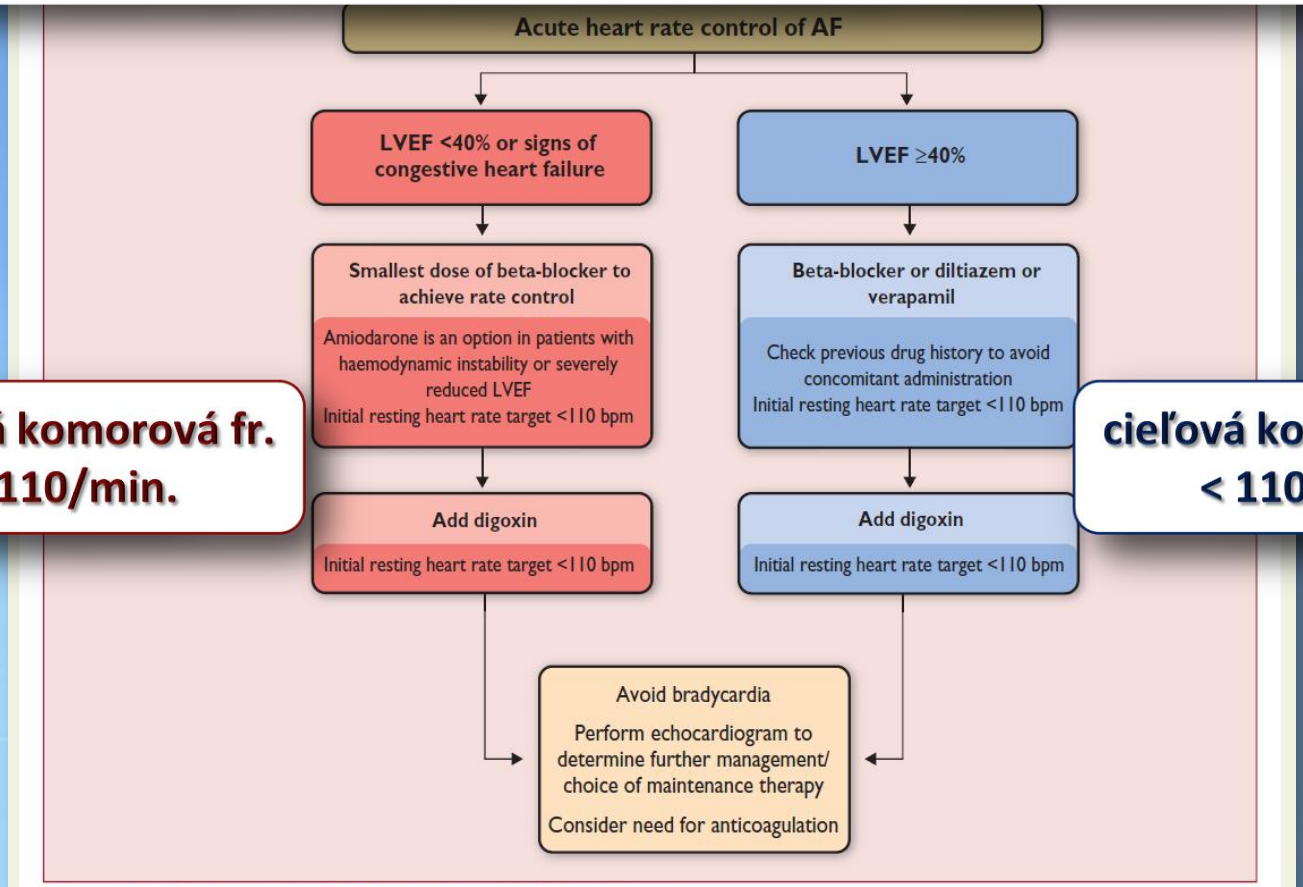
2016 ESC o FP: kontrola frekvencie

Akútna kontrola komorovej frekvencie FP



cieľová komorová fr. < 110/min.

cieľová komorová fr. < 110/min.

See Table 15 for medication dosage. Digitoxin is a suitable alternative to digoxin, where available.
AF = atrial fibrillation; bpm = beats per minute; LVEF = left ventricular ejection fraction.

Figure 14 Acute heart rate control in patients with atrial fibrillation.

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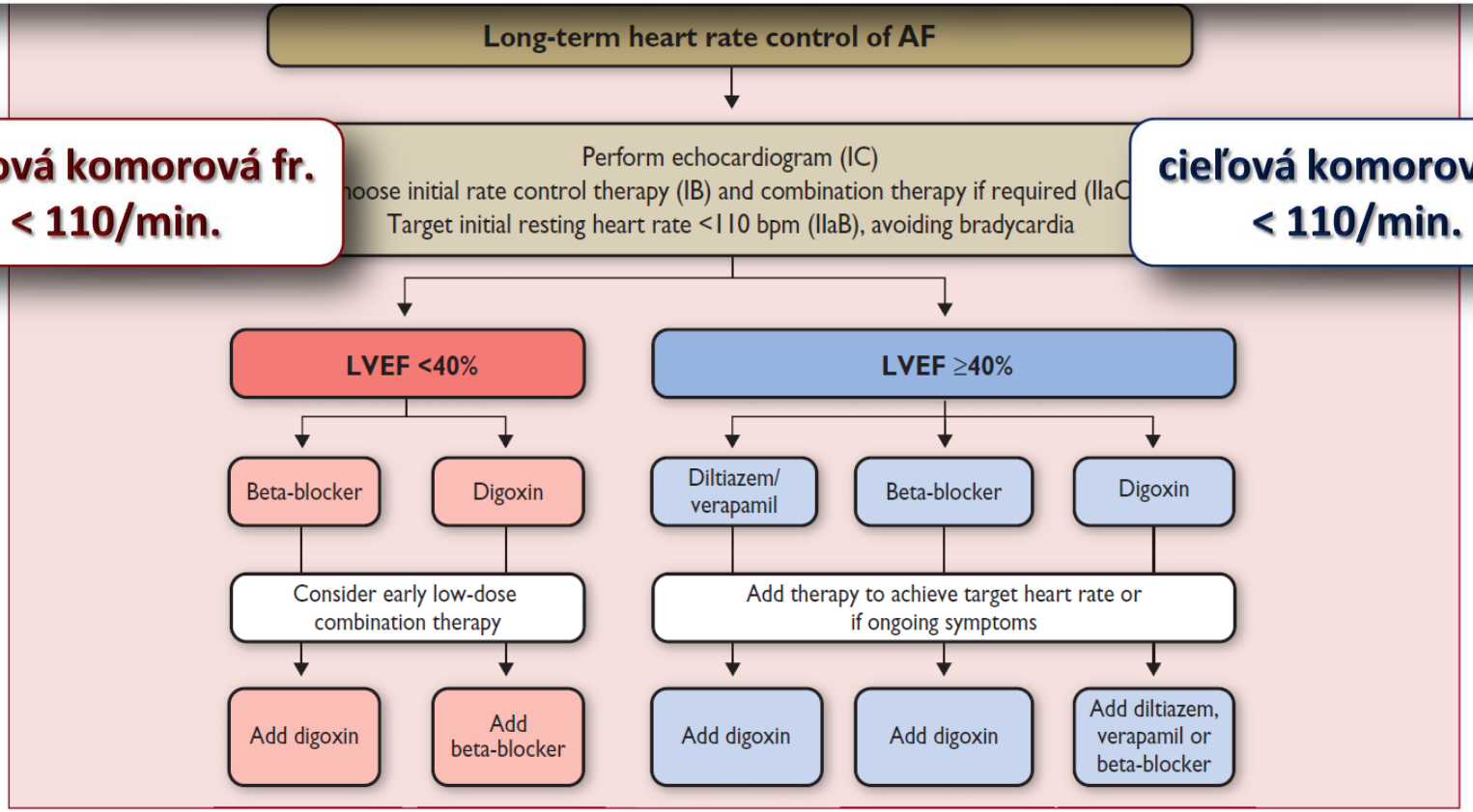
2016 ESC o FP: kontrola frekvencie

Dlhodobá kontrola komorovej frekvencie FP

cieľová komorová fr. < 110/min.



cieľová komorová fr. < 110/min.

See Table 15 for medication dosage. Digitoxin is a suitable alternative to digoxin, where available.
AF = atrial fibrillation; bpm = beats per minute; LVEF = left ventricular ejection fraction.

Figure 15 Long-term heart rate control in patients with atrial fibrillation.

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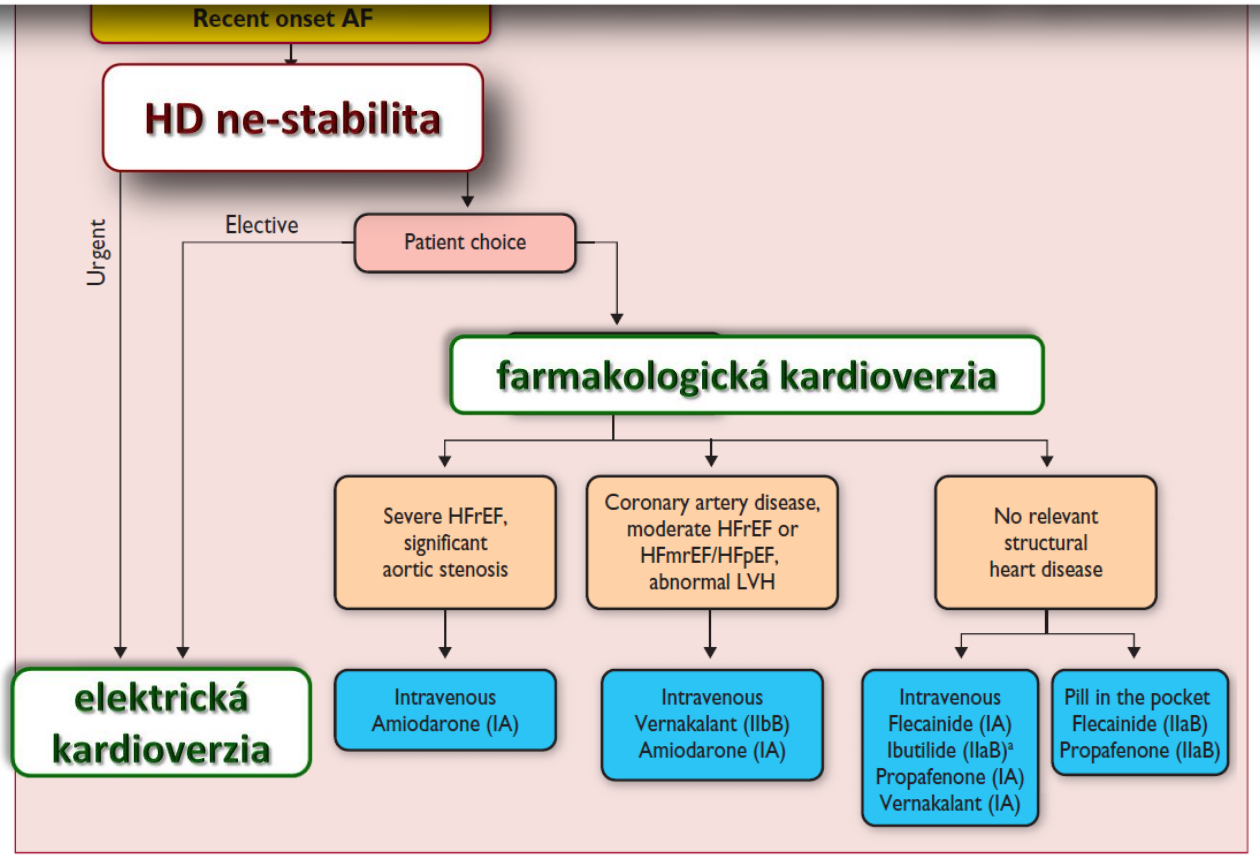
2016 ESC o FP: kontrola rytmu

Akútny manažment kontroly rytmu



AF = atrial fibrillation; HFmrEF = heart failure with mid-range ejection fraction; HFpEF = heart failure with preserved ejection fraction; HFrEF = heart failure with reduced ejection fraction; LVH = left ventricular hypertrophy.
[a]Ibutilide should not be used in patients with long QT interval.

Figure 16 Rhythm control management of recent onset atrial fibrillation.

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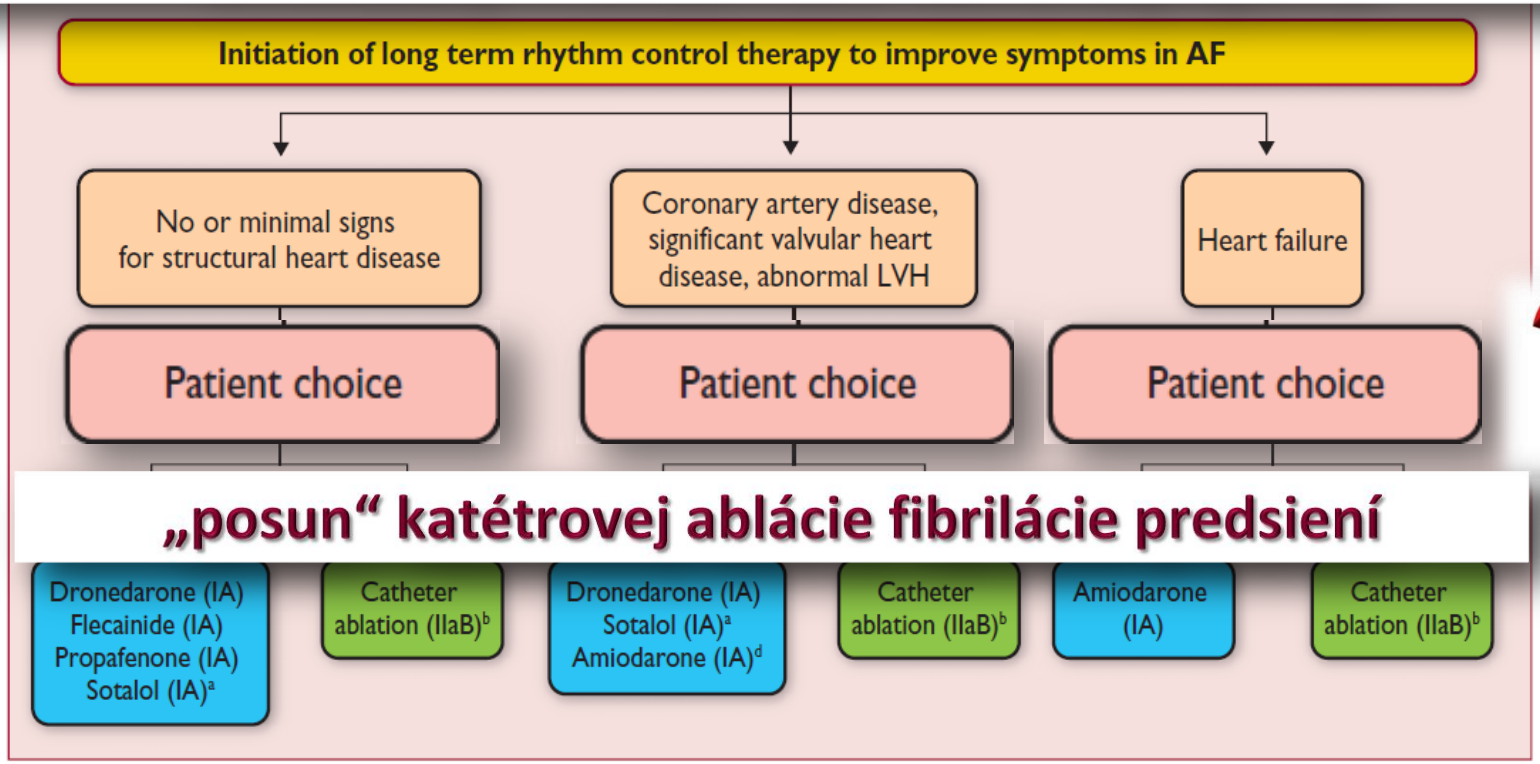
2016 ESC o FP: kontrola rytmu

Dlhodobý manažment kontroly rytmu



„posun“ katétrovej ablácie fibrilácie predsiení

AF = atrial fibrillation; HF = heart failure; LVH = left ventricular hypertrophy;
[a]Sotalol requires careful evaluation of proarrhythmic risk.
[b]Catheter ablation should isolate pulmonary veins and can be performed using radiofrequency or cryoballoon catheters.
[c]Catheter ablation as a first-line therapy is usually reserved for heart failure patients with tachycardiomyopathy.
[d]Amiodarone is a second-choice therapy in many patients because of its extracardiac side-effects.

Figure 17 Initiation of long term rhythm control therapy in symptomatic patients with atrial fibrillation.

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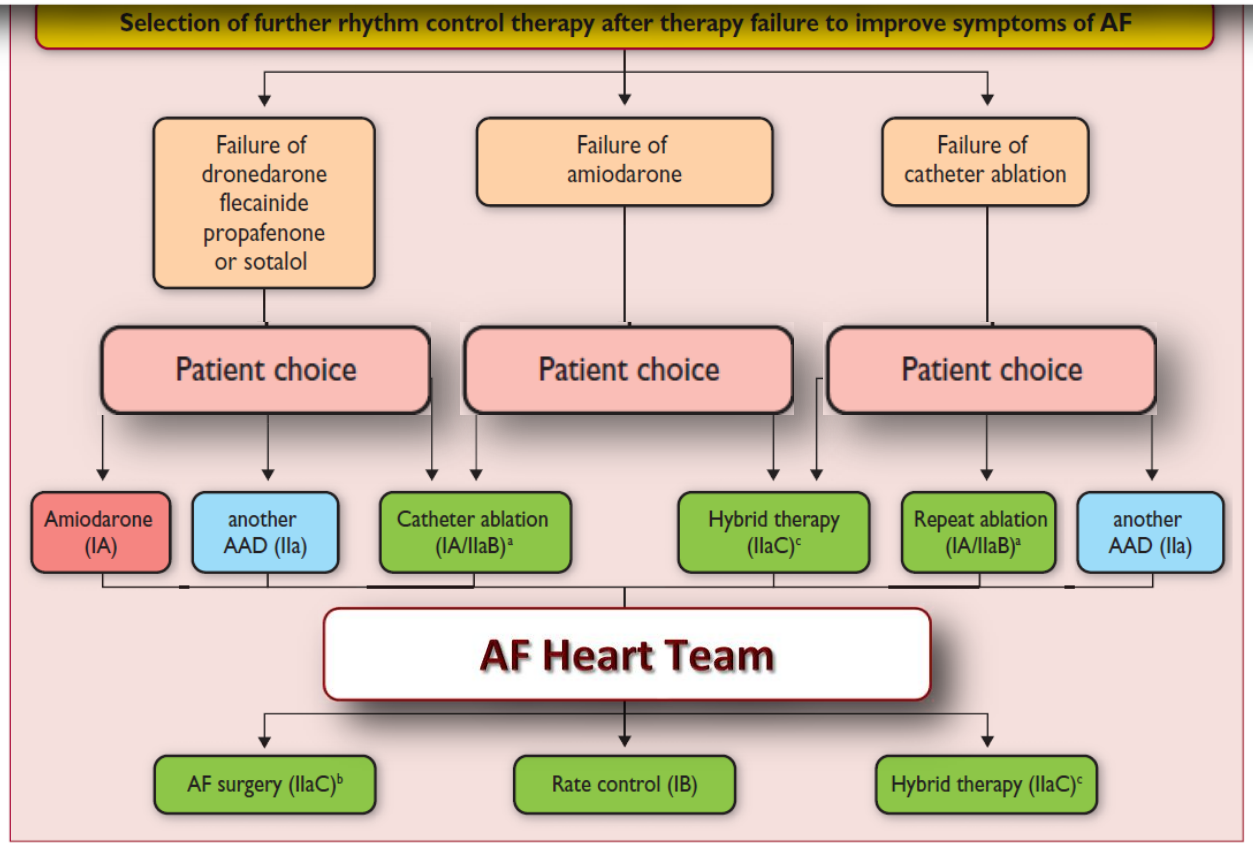
2016 ESC o FP: kontrola rytmu

Postup po zlyhaní iniciálnej liečby kontroly rytmu FP



AAD = antiarrhythmic drug; AF = atrial fibrillation; PVI = pulmonary vein isolation.
[a]catheter ablation should target PVI. IA for paroxysmal AF, IIaB for persistent and long-standing persistent AF.
[b]AF surgery may be PVI (e.g. in paroxysmal AF) or maze surgery (e.g. in therapy-refractory or persistent and long-standing persistent AF).
[c]Hybrid therapy involves combination of antiarrhythmic drugs, catheter ablation, and/or AF surgery.

Figure 20 Choice of rhythm control therapy following treatment failure.

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Čo ROBIŤ a čo NE-ROBIŤ

16. To do and not to do messages from the Guidelines

Recommendations	Class[a]	Level[b]
Recommendations for diagnosis and screening of AF		
ECG documentation is required to establish the diagnosis of AF.	I	B
Opportunistic screening for AF is recommended by pulse taking or ECG rhythm strip in patients >65 years of age.	I	B
In patients with TIA or ischaemic stroke, screening for AF is recommended by short-term ECG recording followed by continuous ECG monitoring for at least 72 hours.	I	B
It is recommended to interrogate pacemakers and ICDs on a regular basis for atrial high rate episodes (AHRE). Patients with AHRE should undergo further ECG monitoring to document AF before initiating AF therapy.	I	B
Recommendations for general management of AF		
Tailored patient education is recommended in all phases of AF management to support patients' perception of AF and to improve management.	I	C
A full cardiovascular evaluation, including an accurate history, careful clinical examination, and assessment of concomitant conditions, is recommended in all AF patients.	I	C
Use of the modified EHRA symptom scale is recommended in clinical practice and research studies to quantify AF-related symptoms.	I	C
Transthoracic echocardiography is recommended in all AF patients to guide management.	I	C
The assessment of kidney function by serum creatinine or creatinine clearance is recommended in all AF patients to detect kidney disease and to support correct dosing of AF therapy.	I	A
Recommendations for stroke prevention in AF		
The CHA_2DS_2-VASc score is recommended for stroke risk prediction in patients with AF.	I	A
Oral anticoagulation therapy to prevent thromboembolism is recommended for all male AF patients with a CHA_2DS_2-VASc score of 2 or more.	I	A
Oral anticoagulation therapy to prevent thromboembolism is recommended in all female AF patients with a CHA_2DS_2-VASc score of 3 or more.	I	A
When oral anticoagulation is initiated in a patient with AF who is eligible for a non vitamin-K-antagonist oral anticoagulant (apixaban, dabigatran, edoxaban, or rivaroxaban), a NOAC is recommended in preference to a Vitamin K antagonist.	I	A
Vitamin K antagonist therapy (INR 2.0–3.0 or higher) is recommended for stroke prevention in AF patients with moderate-to-severe mitral stenosis or mechanical heart valves.	I	B
NOACs (apixaban, dabigatran, edoxaban, and rivaroxaban) are not recommended in patients with mechanical heart valves (Level of evidence B) or moderate-to-severe mitral stenosis (Level of evidence C).	III (harm)	B C
When patients are treated with a vitamin K antagonist, time in therapeutic range (TTR) should be kept as high as possible and closely monitored.	I	A
Combinations of oral anticoagulants and platelet inhibitors increase bleeding risk and should be avoided in AF patients without another indication for platelet inhibition.	III (harm)	B
In male or female AF patients without additional stroke risk factors, anticoagulant or antiplatelet therapy is not recommended for stroke prevention.	III (harm)	B
Antiplatelet monotherapy is not recommended for stroke prevention in AF patients, regardless of stroke risk.	III (harm)	A
After surgical occlusion or exclusion of the left atrial appendage, it is recommended to continue anticoagulation in at-risk patients with AF for stroke prevention.	I	B
Genetic testing before the initiation of vitamin K antagonist therapy is not recommended.	III (no benefit)	B
In AF patients with severe active bleeding events, it is recommended to interrupt oral anticoagulation therapy until the underlying cause is resolved.	I	C
NOACs should be avoided in pregnancy and in women planning a pregnancy.	III (harm)	C
For patients with atrial flutter, antithrombotic therapy is recommended according to the same risk profile used for AF.	I	B
Management of typical atrial flutter with ablation of the cavotricuspid isthmus is recommended for patients failing antiarrhythmic drug therapy or as first-line treatment considering patient preference.	I	B
Lifelong oral anticoagulation to prevent stroke is recommended in hypertrophic cardiomyopathy patients who develop AF.	I	B
Anticoagulation with heparin or low-molecular-weight heparin immediately after ischaemic stroke is not recommended in AF patients.	III (harm)	A
Systemic thrombolysis with a recombinant tissue plasminogen activator is not recommended if the INR is above 1.7 (or, for patients on dabigatran, if activated partial thromboplastin time is outside the normal range).	III (harm)	C
After TIA or stroke, combination therapy of OAC and an antiplatelet is not recommended.	III (harm)	B

continued

Recommendations	Class[a]	Level[b]
Recommendations for rate control of AF		
Beta-blockers, digoxin, diltiazem, or verapamil are recommended to control heart rate in AF patients with LVEF ≥40%.	I	B
Beta-blockers and/or digoxin are recommended to control heart rate in AF patients with LVEF <40%.	I	B
In patients with permanent AF (i.e. where no attempt to restore sinus rhythm is planned), antiarrhythmic drugs should not routinely be used for rate control.	III (harm)	A
Recommendations for rhythm control of AF		
Rhythm control therapy is indicated for symptom improvement in patients with AF.	I	B
Cardioversion of AF (either electrical or pharmacological) is recommended in symptomatic patients with persistent or long-standing persistent AF as part of rhythm control therapy.	I	B
In patients with no history of ischaemic or structural heart disease, flecainide, propafenone, or vernakalant are recommended for pharmacological cardioversion of new-onset AF.	I	A
In patients with ischaemic and/or structural heart disease, amiodarone is recommended for cardioversion of AF.	I	A
For cardioversion of AF/atrial flutter, effective anticoagulation is recommended for a minimum of 3 weeks before cardioversion.	I	B
Transoesophageal echocardiography (TOE) is recommended to exclude cardiac thrombus as an alternative to preprocedural anticoagulation when early cardioversion is planned.	I	B
The choice of antiarrhythmic drug needs to be carefully evaluated, taking into account the presence of comorbidities, cardiovascular risk and potential for serious proarrhythmia, extracardiac toxic effects, patient preferences, and symptom burden.	I	A
Dronedarone, flecainide, propafenone, or sotalol are recommended for prevention of recurrent symptomatic AF in patients with normal left ventricular function and without pathological left ventricular hypertrophy.	I	A
Dronedarone is recommended for prevention of recurrent symptomatic AF in patients with stable coronary artery disease, and without heart failure.	I	A
Amiodarone is recommended for prevention of recurrent symptomatic AF in patients with heart failure.	I	B
Antiarrhythmic drug therapy is not recommended in patients with prolonged QT interval (> 0.5 s) or with significant sinoatrial node disease or atrioventricular node dysfunction who do not have a functioning permanent pacemaker.	III (harm)	C
Catheter ablation of symptomatic paroxysmal AF is recommended to improve AF symptoms in patients who have symptomatic recurrences of AF on antiarrhythmic drug therapy (amiodarone, dronedarone, flecainide, propafenone, sotalol) and who prefer further rhythm control therapy, when performed by an electrophysiologist who has received appropriate training and is performing the procedure in an experienced centre.	I	A
ACE-Is or ARBs are not recommended for the secondary prevention of paroxysmal AF in patients with little or no underlying heart disease.	III (no benefit)	B
Moderate regular physical activity is recommended to prevent AF, while athletes should be counselled that long-lasting, more intense sports participation can promote AF.	I	A

ACE = angiotensin-converting enzyme; AF = atrial fibrillation; AHRE = atrial high rate episodes; ARB = angiotensin receptor blocker; CHA_2DS_2-VASc = Congestive Heart failure, hypertension, Age ≥ 75 (doubled), Diabetes, Stroke (doubled), Vascular disease, Age 65–74, and Sex (female); ECG = electrocardiogram; EHRA = European Heart Rhythm Association; ICD = implantable cardioverter defibrillator; INR = international normalized ratio; LVEF = left ventricular ejection fraction; LVH = left ventricular hypertrophy; NOAC = non-vitamin K antagonist oral anticoagulant; OAC = oral anticoagulant; TEE = transoesophageal echocardiography; TTR = time in therapeutic range.

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2016 ESC o FP: „desatoro“

17. A short summary of the management of atrial fibrillation patients

Here, we provide 17 simple rules to guide the diagnosis and management of AF patients according to the 2016 ESC Guidelines for the management of atrial fibrillation developed in cooperation with EACTS.

(1) Use ECG screening in at-risk populations for AF, especially stroke survivors and the elderly.
(2) Document AF by ECG before starting treatment.
(3) Evaluate all AF patients by clinical evaluation, ECG, and echocardiogram for underlying cardiovascular conditions such as hypertension, heart failure, valvular heart disease, and others.
(4) Provide tailored information and education to AF patients to empower them to support AF management.
(5) Propose lifestyle changes to all suitable AF patients to make their management more effective.
(6) Treat underlying cardiovascular conditions adequately, e.g. valve repair or replacement in AF patients with significant valvular heart disease, treatment of heart failure, or management of hypertension, among others.
(7) Use oral anticoagulation in all AF patients unless they are at low risk for stroke based on the CHA_2DS_2VASc score or have true contraindications for anticoagulant therapy.
(8) Anticoagulate patients with atrial flutter similar to AF. Offer isthmus ablation to symptomatic flutter patients.
(9) Reduce all modifiable bleeding risk factors in all AF patients on oral anticoagulation, e.g. by treating hypertension, minimizing the duration and intensity of concomitant antiplatelet and non-steroidal anti-inflammatory drug therapy, treating anaemia and eliminating causes for blood loss, maintaining stable INR values in patients on VKAs, and moderating alcohol intake.
(10) Check ventricular rate in all AF patients and use rate control medications to achieve lenient rate control.
(11) Evaluate AF-related symptoms in all AF patients using the modified EHRA symptoms scale. Whenever patients have AF-related symptoms, aim to improve symptoms by adjustment of rate control therapy and by offering antiarrhythmic drugs, cardioversion, or catheter or surgical ablation.
(12) Select antiarrhythmic drugs based on their safety profile and consider catheter or surgical ablation when antiarrhythmic drugs fail.
(13) Do not offer routine genetic testing in AF patients unless there is suspicion of an inherited cardiac condition.
(14) Do not use antiplatelet therapy for stroke prevention in AF.
(15) Do not permanently discontinue oral anticoagulation in AF patients at increased risk of stroke unless such a decision is taken by a multidisciplinary team.
(16) Do not use rhythm control therapy in asymptomatic AF patients, nor in patients with permanent AF.
(17) Do not perform cardioversion or catheter ablation without anticoagulation, unless an atrial thrombus has been ruled out transoesophageal echocardiogram.

17. A short summary of the management of atrial fibrillation patients

Here, we provide 17 simple rules to guide the diagnosis and management of AF patients according to the 2016 ESC Guidelines for the management of atrial fibrillation developed in cooperation with EACTS.

(1) Use ECG screening in at-risk populations for AF, especially
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(12) Select antiarrhythmic drugs based on their safety profile and consider catheter or surgical ablation when antiarrhythmic drugs fail.
(13) Do not offer routine genetic testing in AF patients unless there is suspicion of an inherited cardiac condition.
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Ďakujem za pozornosť