AKS II: katetrizační strategie

Michael Želízko

Klinika kardiologie IKEM

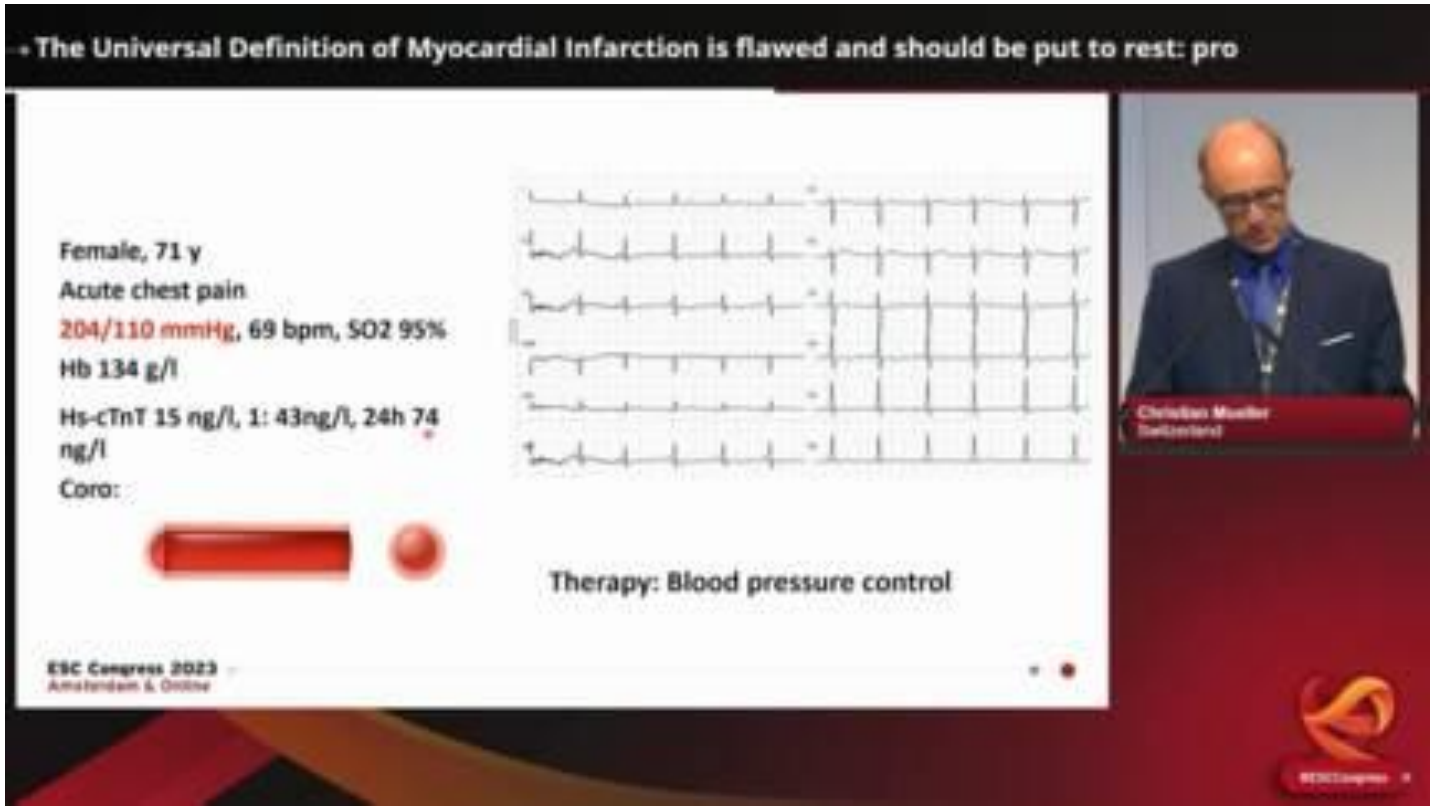
2023 ESC Guidelines for the management of acute coronary syndromes

Official ESC Guidelines slide set

ESC
European Society of Cardiology

The Universal Definition of Myocardial Infarction is flawed and should be put to rest: pro

Speaker: **Professor C. Mueller (Basel, CH)**



Infarkt myokardu II. typu:

- odlišná patofysiologie
  - Tachyarytmie
  - Hypertenzní krize
  - Anemie
  - Srdeční selhání
- Odlišná léčba
  - Kardioverze
  - Kontrola TK
  - Transfuze, vysazení DAPT
  - Léčba ASS
- Odlišná prognóza

Infarkt myokardu IV. a V typu.

PCI – Tn 5xUNL

CABG – Tn 10xUNL

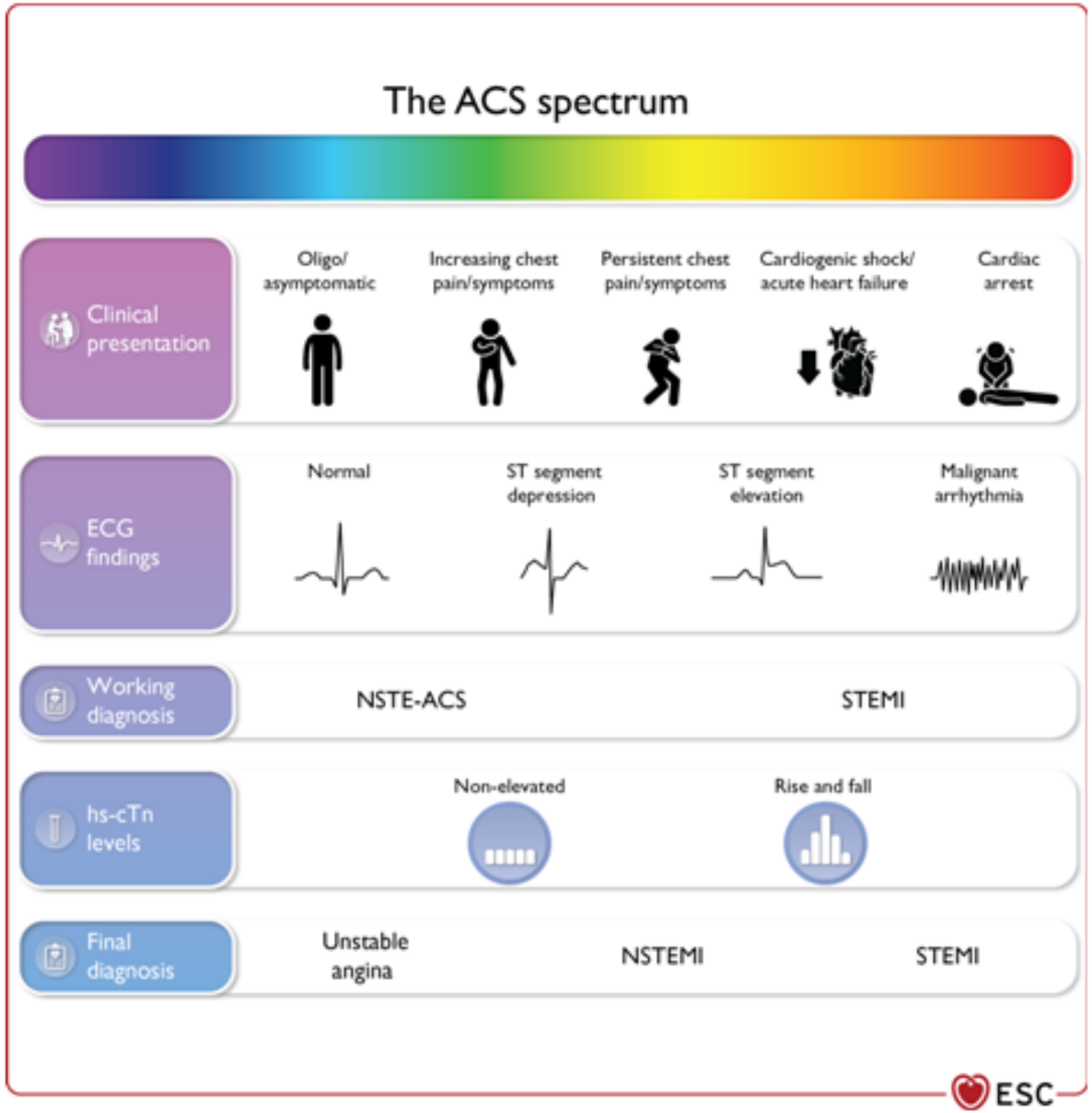
MINOCA

Koronární dissekce, embolizační IM …

Infarkt myokardu = akutní stav vyžadující monitoraci EKG a koronární angiografii (okamžitou nebou časnou) s případnou koronární intervencí, duální antiagregační terapií 12 měsíců a ovlivnění rizikových faktorů

Figure 2

The spectrum of clinical presentations, electrocardiographic findings, and high-sensitivity cardiac troponin levels in patients with acute coronary syndrome

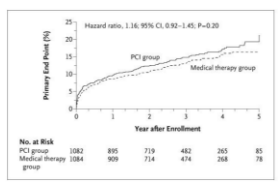


2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi: 10.1093/eurheartj/ehad191)

STEMI

Recommendations for reperfusion therapy and timing of invasive strategy (1)

Recommendations	Class	Level
Recommendations for reperfusion therapy for patients with STEMI		
Reperfusion therapy is recommended in all patients with a working diagnosis of STEMI (persistent ST-segment elevation or equivalents) and symptoms of ischaemia of ≤12 h duration.	I	A
A PPCI strategy is recommended over fibrinolysis if the anticipated time from diagnosis to PCI is <120 min.	I	A
In patients with a working diagnosis of STEMI and a time from symptom onset >12 h, a PPCI strategy is recommended in the presence of ongoing symptoms suggestive of ischaemia, haemodynamic instability, or life-threatening arrhythmias.	I	C
A routine PPCI strategy should be considered in STEMI patients presenting late (12–48 h) after symptom onset.	IIa	B
Routine PCI of an occluded IRA is not recommended in STEMI patients presenting >48 h after symptom onset and without persistent symptoms.	III	A



OAT, Hochman, 2006

Recommendations for management of patients with multivessel disease (2)

Recommendations	Class	Level
Multivessel disease in haemodynamically stable STEMI patients undergoing PPCI		
Complete revascularization is recommended either during the index PCI procedure or within 45 days.	I	A
It is recommended that PCI of the non-IRA is based on angiographic severity.	I	B
Invasive epicardial functional assessment of non-culprit segments of the IRA is not recommended during the index procedure.	III	C
Multivessel disease in haemodynamically stable NSTE-ACS patients undergoing PCI		
In patients presenting with NSTE-ACS and MVD, complete revascularization should be considered, preferably during the index procedure.	IIa	C
Functional invasive evaluation of non-IRA severity during the index procedure may be considered.	IIb	B

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi:10.1093/eurheartj/ehad191)

Revised recommendations (3)

2017 and 2020	Class	Level	2023	Class	Level
Recommendations for antiplatelet and anticoagulant therapy in STEMI					
A potent $P2Y_{12}$ inhibitor (prasugrel or ticagrelor), or clopidogrel if these are not available or are contraindicated, is recommended before (or at latest at the time of) PCI, and maintained over 12 months, unless there are contraindications such as excessive risk of bleeding.	I	A	Pre-treatment with a $P2Y_{12}$ receptor inhibitor may be considered in patients undergoing a primary PCI strategy.	IIb	B

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi: 10.1093/eurheartj/ehad191)

Revised recommendations (7)

2017 and 2020	Class	Level	2023	Class	Level
Recommendations for management of multivessel disease in haemodynamically stable STEMI patients undergoing primary PCI					
Routine revascularization of non-IRA lesions should be considered in STEMI patients with multivessel disease before hospital discharge.	IIa	A	Complete revascularization is recommended either during the index PCI procedure or within 45 days.	I	A

NSTE-ACS

Recommendations for reperfusion therapy and timing of invasive strategy (3 + 4)

Invasive strategy in NSTE-ACS		
An invasive strategy during hospital admission is recommended in NSTE-ACS patients with high-risk criteria or a high index of suspicion for unstable angina.	I	A
A selective invasive approach is recommended in patients without very high- or high-risk NSTE-ACS criteria and with a low index of suspicion for NSTE-ACS.	I	A

Invasive strategy in NSTE-ACS (continued)		
An immediate invasive strategy is recommended in patients with a working diagnosis of NSTE-ACS and with at least one of the following very high-risk criteria: • Haemodynamic instability or cardiogenic shock • Recurrent or refractory chest pain despite medical treatment • In-hospital life-threatening arrhythmias • Mechanical complications of MI • Acute heart failure presumed secondary to ongoing myocardial ischaemia • *Recurrent* dynamic ST-segment or T wave changes, particularly intermittent ST-segment elevation.	I	C

Recommendations for reperfusion therapy and timing of invasive strategy (5)

Recommendations	Class	Level
Invasive strategy in NSTE-ACS (continued)		
An early invasive strategy within 24 h should be considered in patients with at least one of the following high-risk criteria: • Confirmed diagnosis of NSTEMI based on current recommended ESC hs-cTn algorithms • Dynamic ST-segment or T wave changes • Transient ST-segment elevation • GRACE risk score >140	IIa	A

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi: 10.1093/eurheartj/ehad191)

Revised recommendations (2)

2017 and 2020	Class	Level	2023	Class	Level
Recommendations for timing of invasive strategy in NSTE-ACS					
An early invasive strategy within 24 h is recommended in patients with any of the following high-risk criteria: • Diagnosis of NSTEMI suggested by the diagnostic algorithm recommended in guidelines • Dynamic or presumably new contiguous ST/T-segment changes suggesting ongoing ischaemia • Transient ST-segment elevation. • GRACE risk score >140	I	A	An early invasive strategy within 24 h should be considered in patients with at least one of the following high-risk criteria: • Confirmed diagnosis of NSTEMI based on current recommended ESC hs-cTn algorithms • Dynamic ST-segment or T wave changes • Transient ST-segment elevation • GRACE risk score >140	IIa	A

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi: 10.1093/eurheartj/ehad191)

New recommendations (5)

Recommendations	Class	Level
Recommendations for acute coronary syndrome comorbid conditions		
It is recommended to base the choice of long-term glucose-lowering treatment on the presence of comorbidities, including heart failure, chronic kidney disease, and obesity.	I	A
For frail older patients with comorbidities, a holistic approach is recommended to individualize interventional and pharmacological treatments after careful evaluation of the risks and benefits.	I	B
An invasive strategy is recommended in cancer patients presenting with high-risk ACS with expected survival ≥6 months.	I	B
A temporary interruption of cancer therapy is recommended in patients in whom the cancer therapy is suspected to be a contributing cause of ACS.	I	C
A conservative non-invasive strategy should be considered in ACS patients with poor cancer prognosis (i.e. with expected life survival <6 months) and/or very high bleeding risk.	IIa	C

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi: 10.1093/eurheartj/ehad191)

Srdeční zástava a kardiogenní šok

Recommendations for cardiogenic shock

Recommendations	Class	Level
Immediate coronary angiography and PCI of the IRA (if indicated) is recommended in patients with CS complicating ACS.	I	B
Emergency CABG is recommended for ACS-related CS if PCI of the IRA is not feasible/unsuccessful.	I	B
In cases of haemodynamic instability, emergency surgical/catheter-based repair of mechanical complications of ACS is recommended, based on Heart Team discussion.	I	C
Fibrinolysis should be considered in STEMI patients presenting with CS if a PPCI strategy is not available within 120 min from the time of STEMI diagnosis and mechanical complications have been ruled out.	IIa	C
In patients with ACS and severe/refractory CS, short-term mechanical circulatory support may be considered.	IIb	C
The routine use of an IABP in ACS patients with CS and without mechanical complications is not recommended.	III	B

2023 ESC Guidelines for the management of acute coronary syndromes
(European Heart Journal; 2023 – doi:10.1093/eurheartj/ehad191)

Recommendations for management of patients with multivessel disease (1)

Recommendations	Class	Level
It is recommended to base the revascularization strategy (IRA PCI, multivessel PCI/CABG) on the patient's clinical status and comorbidities, as well as their disease complexity, according to the principles of management of myocardial revascularization.	I	B
Multivessel disease in ACS patients presenting in cardiogenic shock		
IRA-only PCI during the index procedure is recommended.	I	B
Staged PCI of non-IRA should be considered.	IIa	C

Revised recommendations (5)

2017 and 2020	Class	Level	2023	Class	Level
Recommendations for cardiac arrest and out-of-hospital cardiac arrest					
Delayed as opposed to immediate angiography should be considered among haemodynamically stable patients without ST-segment elevation successfully resuscitated after out-of-hospital cardiac arrest.	IIa	B	Routine immediate angiography after resuscitated cardiac arrest is not recommended in haemodynamically stable patients without persistent ST-segment elevation (or equivalents).	III	A

Recommendations for cardiac arrest and out-of-hospital cardiac arrest			
Evaluation of neurological prognosis (no earlier than 72 h after admission) is recommended in all comatose survivors after cardiac arrest.	I	C
Transport of patients with out-of-hospital cardiac arrest to a cardiac arrest centre according to local protocol should be considered.	IIa	C

2023 Guidelines on Acute Coronary Syndromes

- Timing of revascularization
  - STEMI – no change, limit 120 min, immediate transfer
  - NSTE-ACS – class I: immediate invasive strategy for very high risk pts.
- Complete revasculatization
  - Clear benefit of angio guided complete revascularization
  - at index procedure for non schock pts
  - or within 45 days (all pts.)
- OHCA
  - STEMI= directly to the cathab
  - No ST = ICU (direct cathlab=class III)
  - Cardiac arrest centers - ???
- Mechanical circulatory support
  - IABP class III
  - ECMO in CS – no effect
  - Impella – class II B – in question