

# SCHWERPUNKT: Synkope

- **Implantierbarer Loop-Rekorder: Welche Indikationen sind vernünftig? (S. 17–21)**

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## Literatur:

1. Krahn AD et al. Use of an Extended Monitoring Strategy in Patients With Problematic Syncope. *Circulation* 1999; 99: 406–10. doi: 10.1161/01.CIR.99.3.406
2. Bisignani A et al. Implantable loop recorder in clinical practice. *J Arrhythm* 2019; 35: 25–32. doi: 10.1002/joa3.12142
3. Passman R et al. Targeted Anticoagulation for Atrial Fibrillation Guided by Continuous Rhythm Assessment With an Insertable Cardiac Monitor: The Rhythm Evaluation for Anticoagulation With Continuous Monitoring (REACT.COM) Pilot Study. *J Cardiovasc Electrophysiol* 2016; 27: 264–70. doi: 10.1111/jce.12864
4. Sulke N et al. The benefit of a remotely monitored implantable loop recorder as a first line investigation in unexplained syncope: the EaSyAS II trial. *Europace* 2016; 18: 912–8. doi: 10.1093/europace/euv228
5. Sanna T et al. Cryptogenic stroke and underlying atrial fibrillation. *N Engl J Med* 2014; 370: 2478–86. doi: 10.1056/NEJMoa1313600
6. Kusiak A et al. Diagnostic value of implantable loop recorder in patients undergoing cryoballoon ablation of atrial fibrillation. *Ann Noninvasive Electrocardiol* 2019; e12733. doi: 10.1111/anec.12733
7. Brignole M et al. 2018 ESC Guidelines for the diagnosis and management of syncope. *Eur Heart J* 2018; 39: 1883–948. doi: 10.1093/eurheartj/ehy037
8. Kirchhof P et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. *European Heart Journal* 2016; 37: 2893–962. doi: 10.1093/eurheartj/ehw210
9. Bosch R & Perings S. Versorgungslücke bei Patienten mit Rhythmusstörungen und Synkope. *Kardiologe* 2019; 13: 24–5. doi: 10.1007/s12181-018-0297-7
10. Nölker G et al. Performance of an Implantable Cardiac Monitor to Detect Atrial Fibrillation: Results of the DETECT AF Study. *J Cardiovasc Electrophysiol* 2016; 27: 1403–10. doi: 10.1111/jce.13089
11. Seidl K et al. Diagnostic assessment of recurrent unexplained syncope with a new subcutaneously implantable loop recorder. *Reveal-Investigators*. *Europace* 2000; 2: 256–62. doi: 10.1053/eupc.2000.0108
12. Podoleanu C et al. Early use of an implantable loop recorder in syncope evaluation: a randomized study in the context of the French healthcare system (FRESH study). *Arch Cardiovasc Dis* 2014; 107: 546–52. doi: 10.1016/j.acvd.2014.05.009
13. Edvardsson N et al. Use of an implantable loop recorder to increase the diagnostic yield in unexplained syncope: results from the PICTURE registry. *Europace* 2011; 13: 262–9. doi: 10.1093/europace/euq418
14. Edvardsson N et al. Costs of unstructured investigation of unexplained syncope: insights from a micro-costing analysis of the observational PICTURE registry. *Europace* 2015; 17: 1141–8. doi: 10.1093/europace/euu412

15. Linker NJ et al. Early versus delayed implantation of a loop recorder in patients with unexplained syncope—effects on care pathway and diagnostic yield. *Int J Cardiol* 2013; 170: 146–51. doi: 10.1016/j.ijcard.2013.10.025
  16. Krahn AD et al. Cost implications of testing strategy in patients with syncope: randomized assessment of syncope trial. *J Am Coll Cardiol* 2003; 42: 495–501. doi: 10.1016/s0735-1097(03)00659-4
  17. Zaidi A et al. Misdiagnosis of epilepsy: many seizure-like attacks have a cardiovascular cause. *J Am Coll Cardiol* 2000; 36: 181–4. doi: 10.1016/s0735-1097(00)00700-2
  18. Petkar S et al. Prolonged implantable electrocardiographic monitoring indicates a high rate of misdiagnosis of epilepsy-REVISE study. *Europace* 2012; 14: 1653–60. doi: 10.1093/europace/eus185
  19. Ho RT et al. Generalized tonic-clonic seizures detected by implantable loop recorder devices: diagnosing more than cardiac arrhythmias. *Heart Rhythm* 2006; 3: 857–61. doi: 10.1016/j.hrthm.2006.03.026
  20. Bhangu J et al. Long-term cardiac monitoring in older adults with unexplained falls and syncope. *Heart* 2016; 102: 681–6. doi: 10.1136/heartjnl-2015-308706
  21. Yushan B et al. Association between Bilateral Infarcts Pattern and Detection of Occult Atrial Fibrillation in Embolic Stroke of Undetermined Source (ESUS) Patients with Insertable Cardiac Monitor (ICM). *J Stroke Cerebrovasc Dis* 2019; 28: 2448–52. doi: 10.1016/j.jstrokecerebrovasdis.2019.06.025
  22. Healey JS et al. Subclinical atrial fibrillation and the risk of stroke. *N Engl J Med* 2012; 366: 120–9. doi: 10.1056/NEJMoa1105575
  23. Hart RG et al. Rivaroxaban for Stroke Prevention after Embolic Stroke of Undetermined Source. *New England Journal of Medicine* 2018; 378: 2191–201. doi: 10.1056/NEJMoa1802686
  24. Diener H-C et al. Dabigatran for Prevention of Stroke after Embolic Stroke of Undetermined Source. *New Engl J Med* 2019; 380: 1906–17. doi: 10.1056/NEJMoa1813959
  25. Heeger C-H et al. What is the real recurrence rate after cryoballoon-based pulmonary vein isolation? Lessons from rhythm follow-up based on implanted cardiac devices with continuous atrial monitoring. *Heart Rhythm* 2018; 15: 1844–50. doi: 10.1016/j.hrthm.2018.07.016
  26. Forkmann M et al. Characteristics of early recurrences detected by continuous cardiac monitoring influencing the long-term outcome after atrial fibrillation ablation. *J Cardiovasc Electrophysiol* 2019; 30: 1886–93. doi: 10.1111/jce.14109
  27. Mascarenhas DAN et al. Role of insertable cardiac monitors in anticoagulation therapy in patients with atrial fibrillation at high risk of bleeding. *Europace* 2016; 18: 799–806. doi: 10.1093/europace/euv350
  28. Dörr M et al. The WATCH AF Trial: SmartWATCHes for Detection of Atrial Fibrillation. *JACC Clin Electrophysiol* 2019; 5: 199–208. doi: 10.1016/j.jacep.2018.10.006
  29. Perez MV et al. Large-Scale Assessment of a Smartwatch to Identify Atrial Fibrillation. *New Engl J Med* 2019; 381: 1909–17. doi: 10.1056/NEJMoa1901183
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- **Reanimation – Strukturierte Versorgung in Cardiac (S. 38–43)**

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**Literatur:**

1. Dempsey RJ et al. Moderate hypothermia reduces postischemic edema development and leukotriene production. *Neurosurgery* 1987; 21: 177–181
2. Scholz KH et al. [Quality indicators and structural requirements for Cardiac Arrest Centers-German Resuscitation Council (GRC)]. *Med Klin Intensivmed Notfmed* 2017; 112: 459–461
3. Elmer J et al. Long-term survival benefit from treatment at a specialty center after cardiac arrest. *Resuscitation* 2016; 108: 48–53
4. Michels G et al. Recommendations for extracorporeal cardiopulmonary resuscitation (eCPR): consensus statement of DGIIIN, DGK, DGTHG, DGfK, DGNI, DGAI, DIVI and GRC. *Clin Res Cardiol* 2019; 108: 455–464
5. Bougouin W et al. Extracorporeal cardiopulmonary resuscitation in out-of-hospital cardiac arrest: a registry study. *Eur Heart J* 2020; 41: 1961–1971
6. Akin M et al. Mortality in patients with out-of-hospital cardiac arrest undergoing a standardised protocol including therapeutic hypothermia and routine coronary angiography - experience from the HAnnover COoling REgistry (HACORE). *JACC Cardiovasc Interv* 2018; 11: 1811–1820
7. Noc M et al. Invasive coronary treatment strategies for out-of-hospital cardiac arrest: a consensus statement from the European association for percutaneous cardiovascular interventions (EAPCI)/stent for life (SFL) groups. *EuroIntervention* 2014; 10: 31–37
8. Bougouin W et al. Should We Perform an Immediate Coronary Angiogram in All Patients After Cardiac Arrest?: Insights From a Large French Registry. *JACC: Cardiovascular Interventions* 2018; 11: 249–256
9. Staer-Jensen H et al. Post-Resuscitation ECG for Selection of Patients for Immediate Coronary Angiography in Out-of-Hospital Cardiac Arrest. *Circ Cardiovasc Interv* 2015; 8(10): e002784.
10. Bernard SA et al. Treatment of comatose survivors of out-of-hospital cardiac arrest with induced hypothermia. *N Engl J Med* 2002; 346: 557–563
11. The Hypothermia after Cardiac Arrest Study Group. Mild therapeutic hypothermia to improve the neurologic outcome after cardiac arrest. *N Engl J Med* 2002; 346: 549–556
12. Bro-Jeppesen Jet al. Post-hypothermia fever is associated with increased mortality after out-of-hospital cardiac arrest. *Resuscitation* 2013; 84: 1734–1740
13. Nielsen Net al. Targeted temperature management at 33 degrees C versus 36 degrees C after cardiac arrest. *N Engl J Med* 2013; 369: 2197–2206
14. Kirkegaard Het al. Targeted Temperature Management for 48 vs 24 Hours and Neurologic Outcome After Out-of-Hospital Cardiac Arrest: A Randomized Clinical Trial. *JAMA* 2017; 318: 341–350
15. Lopez-de-Sa Eet al. A multicentre randomized pilot trial on the effectiveness of different levels of cooling in comatose survivors of out-of-hospital cardiac arrest: the FROST-I trial. *Intensive Care Med* 2018; 44: 1807–1815
16. Bray JEet al. Changing target temperature from 33 degrees C to 36 degrees C in the ICU management of out-of-hospital cardiac arrest: A before and after study. *Resuscitation* 2017; 113: 39–43
17. Salter Ret al. Changes in Temperature Management of Cardiac Arrest Patients Following Publication of the Target Temperature Management Trial. *Crit Care Med* 2018; 46: 1722–1730

18. Deye Net al. Endovascular Versus External Targeted Temperature Management for Patients With Out-of-Hospital Cardiac Arrest: A Randomized, Controlled Study. *Circulation* 2015; 132: 182–193
  19. Flierl Uet al. Efficacy of platelet inhibition with prasugrel in patients with acute myocardial infarction undergoing therapeutic hypothermia after cardiopulmonary resuscitation. *Thromb Haemost* 2016; 115: 960–968
  20. Monsieurs KG et al. European Resuscitation Council Guidelines for Resuscitation 2015: Section 1. Executive summary. *Resuscitation* 2015; 95: 1–80
  21. Riker RR et al. Neurological Pupil Index and Pupillary Light Reflex by Pupillometry Predict Outcome Early After Cardiac Arrest. *Neurocrit Care* 2020; 32: 152–161
  22. Kang C et al. Relationship between optic nerve sheath diameter measured by magnetic resonance imaging, intracranial pressure, and neurological outcome in cardiac arrest survivors who underwent targeted temperature management. *Resuscitation* 2019; 145: 43–49
  23. Bender A et al. S1-Leitlinie Hypoxisch-ischämische Enzephalopathie im Erwachsenenalter.
  24. Fillbrandt A & Frank B. Gender differences in cognitive outcome after cardiac arrest: A retrospective cohort study. *Brain Inj* 2020; 34: 122–130
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- **Verkürzte DAPT reduziert Ereignisrisiko nach PCI mit XIENCE-Stents (S. 44)**

#### **Literatur:**

1. Valgimigli M. et al. *Eur Heart J* 2018; 213: 213–254
2. Palmerini T et al. *Lancet* 2015; 385(9985): 2371–2382
3. Watanabe H. et al. *JAMA* 2019; 321(24): 2414–2427
4. Palmerini T et al. *J Am Coll Cardiol* 2015; 65(23): 2496–2507
5. Natsuaki M. et al. *Cardiovasc Interv Ther* 2016; 31(3): 196–209
6. Watanabe H et al. *Circulation* 2019; Dec 3; 140(23): 1957–1959