Akut Kalp Yetmezliği Tedavisinde Neler Değişti ?

Dr. Ögr. Üyesi Erdal Demirtaş
Sivas Cumhuriyet Üniversitesi
Acil Tıp Anabilimdalı


Legendary
LMC


XVO 818

KALP YETMEZLİĞİ

- Kalp yetmezliği (KY), acil serviste sık karşılaştığımız, hayatı tehdit edebilecek ve acil müdahale gerektiren klinik durumlardan biridir. Hastalar, kronik kalp yetmezliğinin akut dekompanzasyonu ile gelebileceği gibi yeni başlangıçlı akut tabloyla da karşımıza çıkabilir

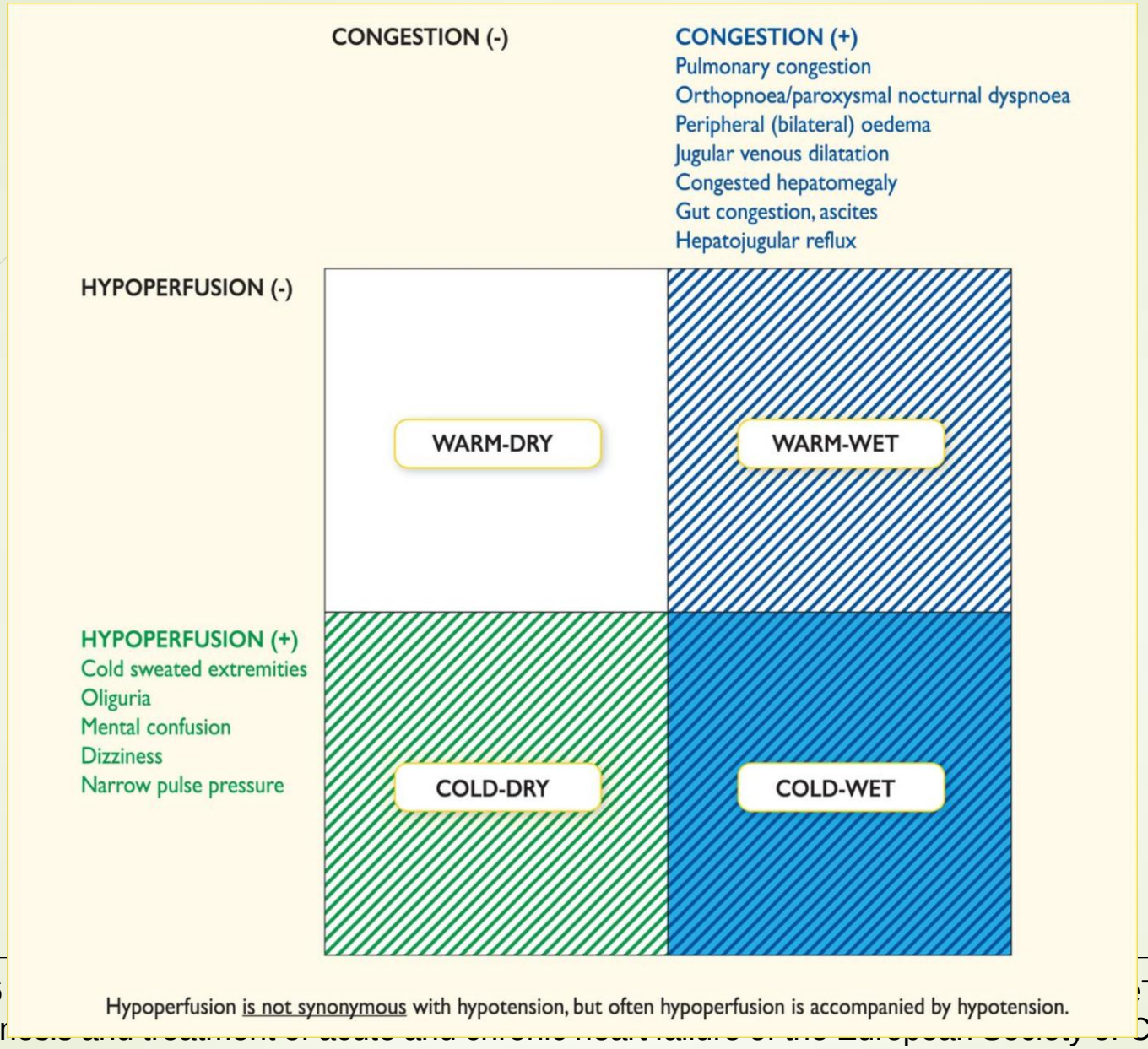
Eur Heart J. 2016 Jul 14;37(27):2129-2200. doi: 10.1093/eurheartj/ehw128. Epub 2016 May 20.

2016 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure: The Task Force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)Developed with the special contribution of the Heart Failure Association (HFA) of the ESC.

Ponikowski P, Voors AA, Anker SD, Bueno H, Cleland JGF, Coats AJS, Falk V, González-Juanatey JR, Harjola VP, Jankowska EA, Jessup M, Linde C, Nihoyannopoulos P, Parissis JT, Pieske B, Riley JP, Rosano GMC, Ruilope LM, Ruschitzka F, Rutten FH, van der Meer P; ESC Scientific Document Group.

⊕ Collaborators (112)

- Temel yenilikler
  - Sınıflandırma
  - Tedavi algoritmaları
- Sınıflandırmalarda özellikle hastanın kliniği ön planda olacak sekilde kullanımı kolay bir sınıflandırma planlanmış
- Erken tanı ve tedavi algoritmalarının akut MI da başarısı örnek gösterilerek akut kalp yetmezliğinde de bu şekilde erken tanı ve tedavi algoritmaları geliştirilmeli denmiş



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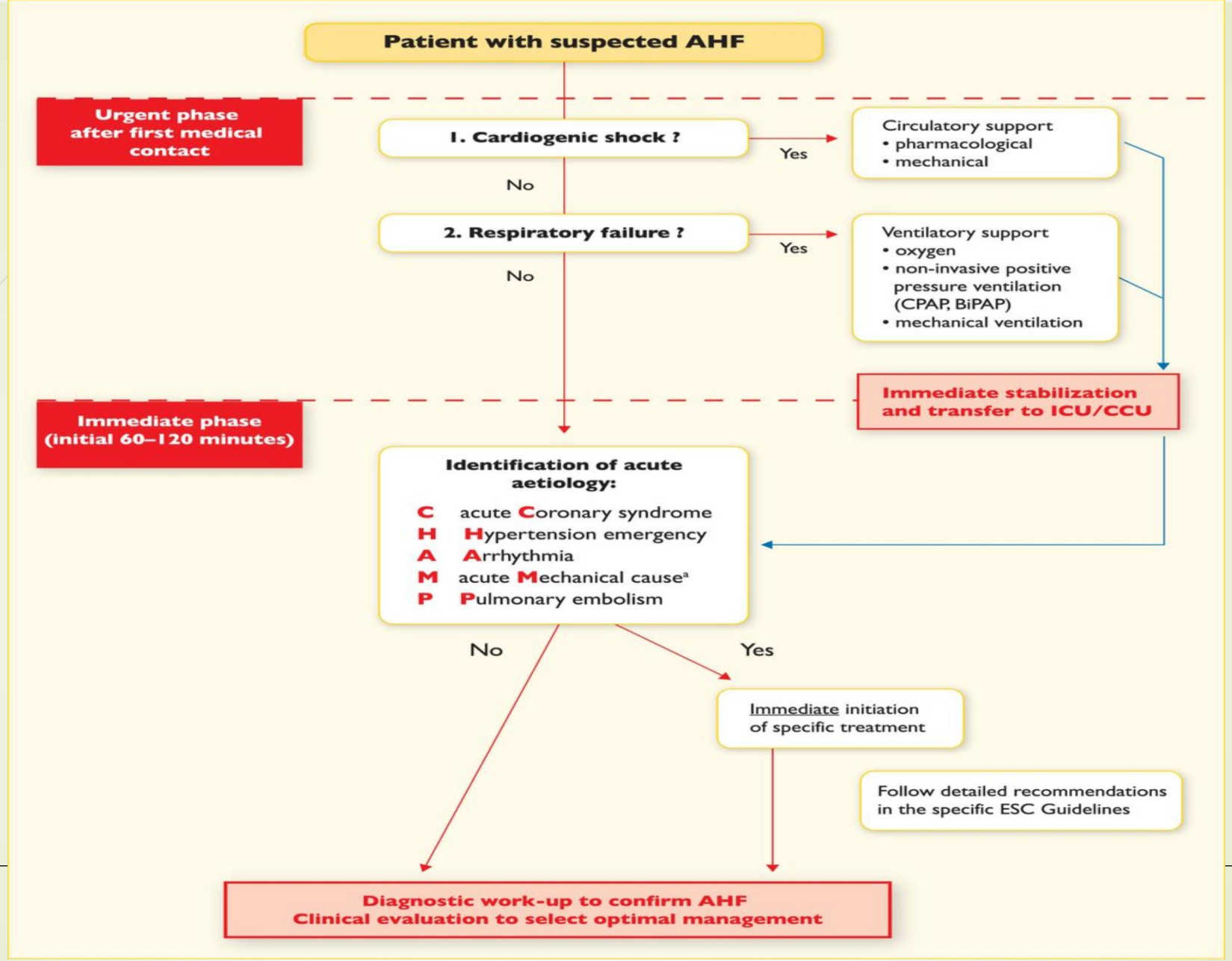

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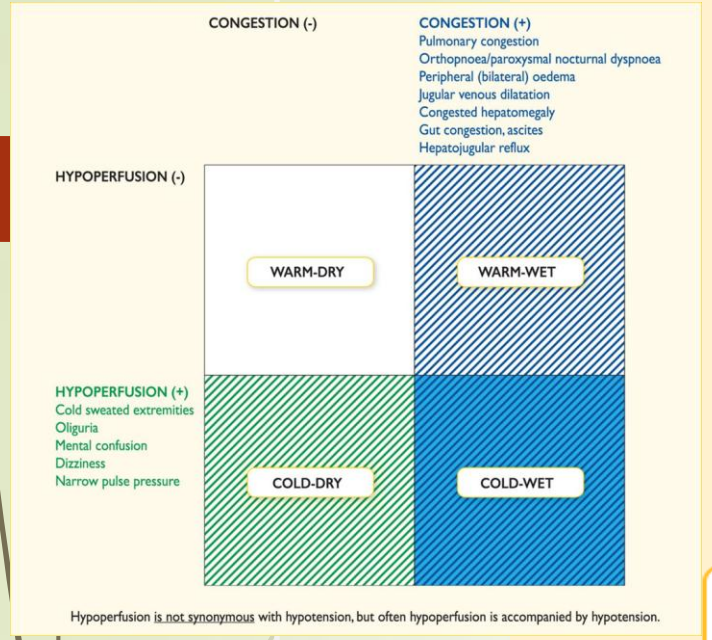

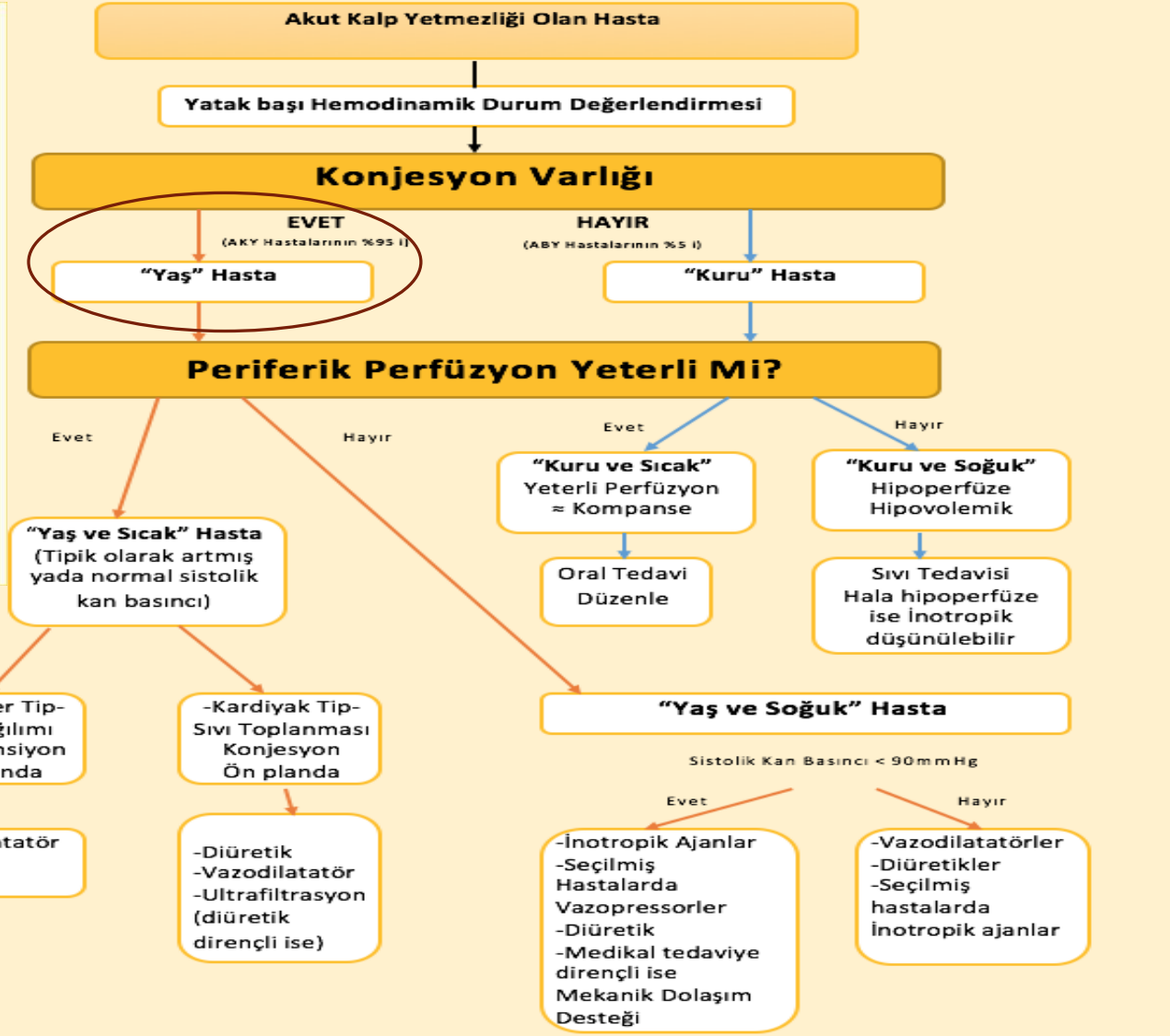

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Eur Heart J. 2016;37(27):2129-2200. doi:10.1093/eurheartj/ehw128

- Tanısal testler içerisinde,
- **BNP <100 pg/mL, NT-proBNP <300 pg/mL, MR-proANP <120 pg/mL**
- EKG, EKO
- AC filmi
- diğer testler (CBK , BK …)

AKY İLAÇ ÖNERİLERİ

Recommendations	Class[a]	Level[b]	Ref[c]
Diuretics			
Intravenous loop diuretics are recommended for all patients with AHF admitted with signs/symptoms of fluid overload to improve symptoms. It is recommended to regularly monitor symptoms, urine output, renal function and electrolytes during use of i.v. diuretics.	I	C	
In patients with new-onset AHF or those with chronic, decompensated HF not receiving oral diuretics the initial recommended dose should be 20–40 mg i.v. furosemide (or equivalent); for those on chronic diuretic therapy, initial i.v. dose should be at least equivalent to oral dose.	I	B	540, 548
It is recommended to give diuretics either as intermittent boluses or as a continuous infusion, and the dose and duration should be adjusted according to patients' symptoms and clinical status.	I	B	548
Combination of loop diuretic with either thiazide-type diuretic or spironolactone may be considered in patients with resistant oedema or insufficient symptomatic response.	IIb	C	549
Vasodilators			
i.v. vasodilators should be considered for symptomatic relief in AHF with SBP >90 mmHg (and without symptomatic hypotension). Symptoms and blood pressure should be monitored frequently during administration of i.v. vasodilators.	IIa	B	537, 550–555
In patients with hypertensive AHF, i.v. vasodilators should be considered as initial therapy to improve symptoms and reduce congestion.	IIa	B	537, 551–554
Inotropic agents – dobutamine, dopamine, levosimendan, phosphodiesterase III (PDE III) inhibitors			
Short-term, i.v. infusion of inotropic agents may be considered in patients with hypotension (SBP <90 mmHg) and/or signs/symptoms of hypoperfusion despite adequate filling status, to increase cardiac output, increase blood pressure, improve peripheral perfusion and maintain end-organ function.	IIb	C	
An intravenous infusion of levosimendan or a PDE III inhibitor may be considered to reverse the effect of beta-blockade if beta-blockade is thought to be contributing to hypotension with subsequent hypoperfusion.	IIb	C	
Inotropic agents are not recommended unless the patient is symptomatically hypotensive or hypoperfused because of safety concern.	III	A	556, 557
Vasopressors			
A vasopressor (norepinephrine preferably) may be considered in patients who have cardiogenic shock, despite treatment with another inotrope, to increase blood pressure and vital organ perfusion.	IIb	B	558
It is recommended to monitor ECG and blood pressure when using inotropic agents and vasopressors, as they can cause arrhythmia, myocardial ischaemia, and in the case of levosimendan and PDE III inhibitors also hypotension. In such cases intra-arterial blood pressure measurement may be considered.	I IIb	C C	540, 559–563
Thrombo-embolism prophylaxis			
Thrombo-embolism prophylaxis (e.g. with LMWH) is recommended in patients not already anticoagulated and with no contra-indication to anticoagulation, to reduce the risk of deep venous thrombosis and pulmonary embolism.	I	B	564
Other drugs			
For acute control of the ventricular rate in patients with atrial fibrillation: a. digoxin and/or beta-blockers should be considered as the first-line therapy.[d] b. amiodarone may be considered.	IIa IIb	C B	565–567
Opiates may be considered for cautious use to relieve dyspnoea and anxiety in patients with severe dyspnoea but nausea and hypopnea may occur.	IIb	B	568, 569

KARDİYOJENİK ŞOK İLAÇ ÖNERİLERİ

Recommendations	Class[a]	Level[b]	Ref[c]
In all patients with suspected cardiogenic shock, immediate ECG and echocardiography are recommended.	I	C	
All patients with cardiogenic shock should be rapidly transferred to a tertiary care center which has a 24/7 service of cardiac catheterization, and a dedicated ICU/CCU with availability of short-term mechanical circulatory support.	I	C	
In patients with cardiogenic shock complicating ACS an immediate coronary angiography is recommended (within 2 hours from hospital admission) with an intent to perform coronary revascularization.	I	C	
Continous ECG and blood pressure monitoring are recommended.	I	C	
Invasive monitoring with an arterial line is recommended.	I	C	
Fluid challenge (saline or Ringer's lactate, >200 ml/15–30 min) is recommended as the first-line treatment if there is no sign of overt fluid overload.	I	C	
Intravenous inotropic agents (dobutamine) may be considered to increase cardiac output.	IIb	C	
Vasopressors (norepinephrine preferable over dopamine) may be considered if there is a need to maintain SBP in the presence of persistent hypoperfusion.	IIb	B	558
IABP is not routinely recommended in cardiogenic shock.	III	B	585, 586
Short-term mechanical circulatory support may be considered in refractory cardiogenic shock depending on patient age, comorbidities and neurological function.	IIb	C	

Dirüretikler

- AKY nin köşe taşıdır
- Diürezi arttırmak ve diüretik direnç gelişimini önlemek için loop diüretikler (furosemide veya torasemid) ile birlikte tiazid grubu diüretikler yada Natriüretik dozlarda MRA birlikte kullanılabilir. (yakın hipokalemi ,hipovolemi ve renal fonksiyon takibi ile birlikte)
- **Daha önce diüretik kullanmayanlar için başlangıç parenteral furosemide dozu 20–40 mg olarak önerilirken, (10-20 mg bolus torasemid alternatif)**
- **Daha önce kullananlarda parenteral dozun oral doza en azından eşit olması gerektiği vurgulanıyor**.

vazodilatörler

- İntravenöz vazodilatatörler semptomatik rahatlama için AKY'de en sık kullanılan ikinci ajanlardır; bununla birlikte, yararlı etkilerini doğrulayan sağlam bir kanıt yoktur.
- Vazodilatörler hipertansif AKY olan hastalarda özellikle yararlıdır, **SBP <90 mmHg olanlarda kaçınılamalıdır.** (Bir önceki klavuzda eşik 110 mmhg)

Vazopressörler

- Yüksek dozlarda (> 5 µg / kg / dak) (norepinefrin veya dopamin)
- belirgin periferal arteryel vazokonstrüktör etkisine sahip ilaçlar,
- hipotansiyonu olan hastalara verilir.
- kan basıncını yükseltmek ve hayati organlara kanı dağıtmak
- Bununla birlikte, bu, LV son yükündeki artışa sebep olur.
- Norepinefrin dopamine göre yan etki ve mortalite açısından daha güvenlidir.

- AKY'de, hipoksemik olmayan hastalarda oksijen, vazokonstriksiyona ve kardiyak outputta azalmaya neden olduğu için rutin olarak kullanılmamalıdır.
- Anestezik ilaçların yan etkilerine dikkat edilmelidir, bunların arasında propofol hipotansiyonu indükleyebilir ve kardiyodepressif yan etkilere neden olabilir. Aksine, midazolamın daha az kardiyak yan etkisi olabilir ve bu nedenle AKY veya kardiyojenik şok olan hastalarda tercih edilir.

- Digoksin : Hızlı ventriküler yanıtlı AF'si olan hastalarda 0,25-0,50 mg iv dozda endikedir
- Vazopressin antagonistleri (Tolvaptan): Volüm fazlalığı olan ve dirençli hiponatremisi olan hastalarda kullanılabilir.
- Anksiyolitik ve sedatifler : Ajitasyonu olan hastalarda kullanılabilir. Benzodiazepinler en iyi seçenektir

Diyaliz

- Günümüzde, ultrafiltrasyonun rutin kullanımı önerilmemektedir ve diüretik bazlı stratejilere cevap vermeyen hastalarla sınırlandırılmalıdır. Aşağıdaki kriterler, aşırı hacim yükü olan hastalarda renal replasman tedavisine başlanması gerekliliğini gösterir:
- sıvı resüsitasyon önlemlerine cevap vermeyen oligüria
- şiddetli hiperkalemi (K +> 6.5 mmol / L)
- şiddetli asidemi (pH <7.2)
- serum üre düzeyi> 25 mmol / L (150 mg / dL)
- serum kreatinin> 300 umol / L (> 3.4 mg / dL).

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Time-to-Furosemide Treatment and Mortality in Patients Hospitalized With Acute Heart Failure

Yuya Matsue, MD, PhD,[a,b] Kevin Damman, MD, PhD,[b] Adriaan A. Voors, MD, PhD,[b] Nobuyuki Kagiyama, MD,[c] Tetsuo Yamaguchi, MD, PhD,[d] Shunsuke Kuroda, MD,[a] Takahiro Okumura, MD, PhD,[e] Keisuke Kida, MD, PhD,[f] Atsushi Mizuno, MD,[g] Shogo Oishi, MD,[h] Yasutaka Inuzuka, MD, PhD,[i] Eiichi Akiyama, MD,[j] Ryuichi Matsukawa, MD, PhD,[k] Kota Kato, MD, PhD,[l] Satoshi Suzuki, MD, PhD,[m] Takashi Naruke, MD, PhD,[n] Kenji Yoshioka, MD,[o] Tatsuya Miyoshi, MD, PhD,[p] Yuichi Baba, MD,[q] Masayoshi Yamamoto, MD, PhD,[r] Koji Murai, MD,[s] Kazuo Mizutani, MD, PhD,[t] Kazuki Yoshida, MD, MPH, MS,[u] Takeshi Kitai, MD, PhD[v,w]

ABSTRACT

BACKGROUND Acute heart failure (AHF) is a life-threatening disease requiring urgent treatment, including a recommendation for immediate initiation of loop diuretics.

OBJECTIVES The authors prospectively evaluated the association between time-to-diuretic treatment and clinical outcome.

METHODS REALITY-AHF (Registry Focused on Very Early Presentation and Treatment in Emergency Department of Acute Heart Failure) was a prospective, multicenter, observational cohort study that primarily aimed to assess the association between time to loop diuretic treatment and clinical outcome in patients with AHF admitted through the emergency department (ED). Door-to-furosemide (D2F) time was defined as the time from patient arrival at the ED to the first intravenous furosemide injection. Patients with a D2F time $<$60 min were pre-defined as the early treatment group. Primary outcome was all-cause in-hospital mortality.

RESULTS Among 1,291 AHF patients treated with intravenous furosemide within 24 h of ED arrival, the median D2F time was 90 min (IQR: 36 to 186 min), and 481 patients (37.3%) were categorized as the early treatment group. These patients were more likely to arrive by ambulance and had more signs of congestion compared with the nonearly treatment group. In-hospital mortality was significantly lower in the early treatment group (2.3% vs. 6.0% in the nonearly treatment group; $p = 0.002$). In multivariate analysis, earlier treatment remained significantly associated with lower in-hospital mortality (odds ratio: 0.39; 95% confidence interval: 0.20 to 0.76; $p = 0.006$).

CONCLUSIONS In this prospective multicenter, observational cohort study of patients presenting at the ED for AHF, early treatment with intravenous loop diuretics was associated with lower in-hospital mortality. (Registry focused on very early presentation and treatment in emergency department of acute heart failure syndrome; UMIN000014105) (J Am Coll Cardiol 2017;69:3042–51) © 2017 by the American College of Cardiology Foundation.

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CLINICAL RESEARCH

The Effect of Door-to-Diuretic Time on Clinical Outcomes in Patients With Acute Heart Failure

Jin Joo Park, MD,[a] Sun-Hwa Kim, PhD,[a] Il-Young Oh, MD,[a] Dong-Ju Choi, MD,[a] Hyun-Ah Park, MD,[b] Hyun-Jai Cho, MD,[c] Hae-Young Lee, MD,[c] Jae-Yeong Cho, MD,[d] Kye Hun Kim, MD,[d] Jung-Woo Son, MD,[e] Byung-Su Yoo, MD,[e] Jaewon Oh, MD,[f] Seok-Min Kang, MD,[f] Sang Hong Baek, MD,[g] Ga Yeon Lee, MD,[h] Jin Oh Choi, MD,[h] Eun-Seok Jeon, MD,[h] Sang Eun Lee, MD,[i] Jae-Joong Kim, MD,[i] Ju-Hee Lee, MD,[j] Myeong-Chan Cho, MD,[j] Se Yong Jang, MD,[k] Shung Chull Chae, MD,[k] Byung-Hee Oh, MD[c]

ABSTRACT

OBJECTIVES This study sought to examine the impact of door-to-diuretic (D2D) time on mortality in patients with acute heart failure (AHF) who were presenting to an emergency department (ED).

BACKGROUND Most patients with AHF present with congestion. Early decongestion with diuretic agents could improve their clinical outcomes.

METHODS The Korea Acute Heart Failure registry enrolled 5,625 consecutive patients hospitalized for AHF. For this analysis, the study included patients who received intravenous diuretic agents within 24 h after ED arrival. Early and delayed groups were defined as D2D time ≤60 min and D2D time >60 min, respectively. The primary outcomes were in-hospital death and post-discharge death at 1 month and 1 year on the basis of D2D time.

RESULTS A total of 2,761 patients met the inclusion criteria. The median D2D time was 128 min (interquartile range: 63 to 243 min), and 663 (24%) patients belonged to the early group. The baseline characteristics were similar between the groups. The rate of in-hospital death did not differ between the groups (5.0% vs. 5.1%; $p > 0.999$), nor did the post-discharge 1-month (4.0% vs. 3.0%; log-rank $p = 0.246$) and 1-year (20.6% vs. 19.3%; log-rank $p = 0.458$) mortality rates. Get With the Guidelines-Heart Failure risk score was calculated for each patient. In multivariate analyses with adjustment for Get With the Guidelines-Heart Failure risk score and other significant clinical covariates and propensity-matched analyses, D2D time was not associated with clinical outcomes.

CONCLUSIONS The D2D time was not associated with clinical outcomes in a large prospective cohort of patients with AHF who were presenting to an ED. (Registry [Prospective Cohort] for Heart Failure in Korea [KorAHF]; NCT01389843) (J Am Coll Cardiol HF 2018;6:286–94) © 2018 The Authors. Published by Elsevier on behalf of the American College of Cardiology Foundation. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

TEŞEKKÜRLER