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L'actualització en AP

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DISPNEA D'ORIGEN CARDÍAC: EL GRAN REPTE DIAGNÒSTIC

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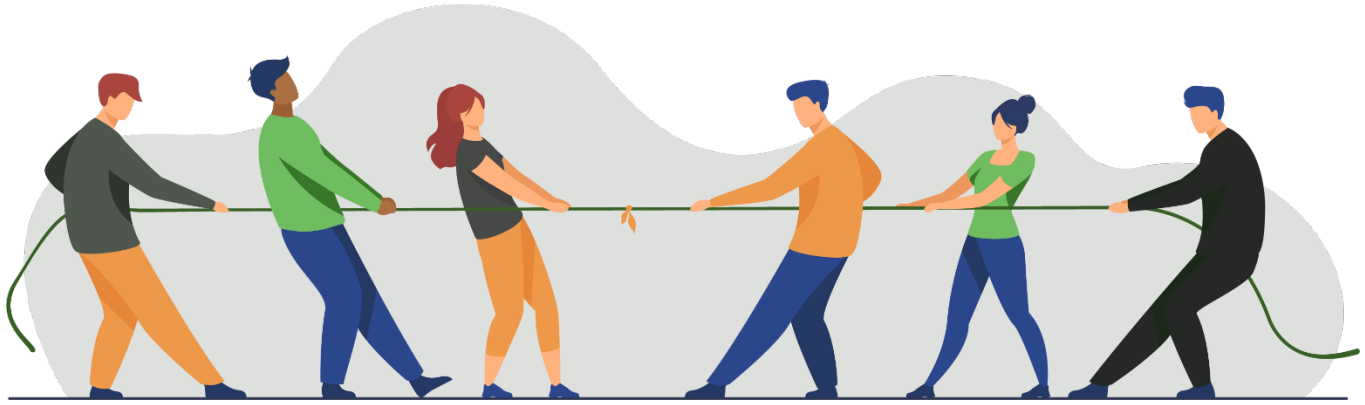
Metgessa Família. EAP Premià de Mar
Grup de Treball de Malalties del Cor de la CAMFiC

CONFLICTES D'INTERÈS

Declaro que no tinc cap conflicte d'interès amb la indústria farmacèutica



DIAGNÒSTIC DIFERENCIAL

- L'estudi de la dispnea és un gran repte pels metges de família.
- Les **comorbiditats** són freqüents: els pacients grans amb IC tenen una mitjana de 5 malalties cròniques. Algunes de les quals dificulten el diagnòstic i el maneig de la IC.
- Sovint els pacients no consulten per símptomes de dispnea.
- L'àmbit d'AP esdevé el lloc ideal per a CRIBATGE ACTIU.

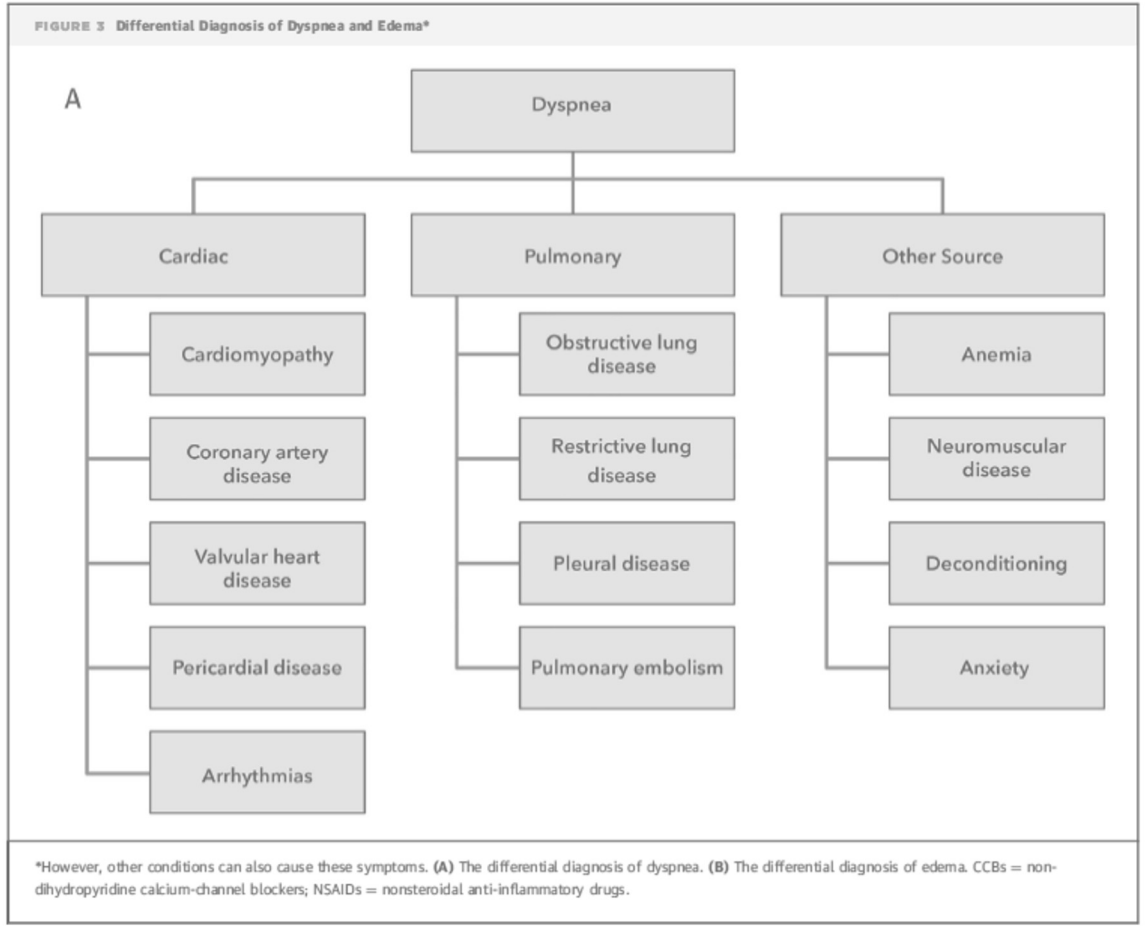


FIGURE 3 Differential Diagnosis of Dyspnea and Edema*

*However, other conditions can also cause these symptoms. **(A)** The differential diagnosis of dyspnea. **(B)** The differential diagnosis of edema. CCBs = non-dihydropyridine calcium-channel blockers; NSAIDs = nonsteroidal anti-inflammatory drugs.

Kittleson, M, Panjrath, G, Amancherla, K. et al. 2023 ACC Expert Consensus Decision Pathway on Management of Heart Failure With Preserved Ejection Fraction: A Report of the American College of Cardiology Solution Set Oversight Committee. J Am Coll Cardiol. 2023 May, 81 (18) 1835–1878. https://doi.org/10.1016/j.jacc.2023.03.393

JOURNAL ARTICLE GUIDELINES

2023 ESC Guidelines for the management of cardiovascular disease in patients with diabetes: Developed by the task force on the management of cardiovascular disease in patients with diabetes of the European Society of Cardiology (ESC) FREE

Nikolaus Marx ✉, Massimo Federici ✉, Katharina Schütt, Dirk Müller-Wieland, Ramzi A Ajjan, Manuel J Antunes, Ruxandra M Christodorescu, Carolyn Crawford, Emanuele Di Angelantonio, Björn Eliasson ... Show more
Author Notes

European Heart Journal, Volume 44, Issue 39, 14 October 2023, Pages 4043–4140,
https://doi.org/10.1093/eurheartj/ehad192
Published: 25 August 2023

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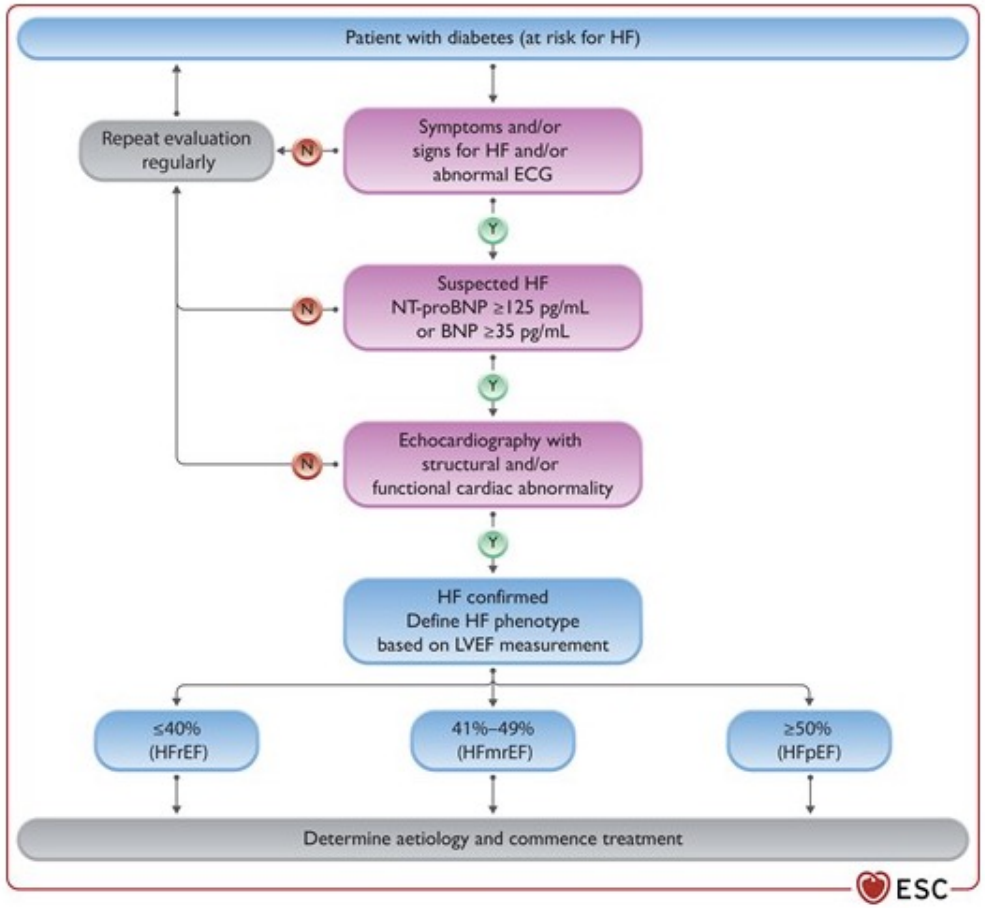
- Diagnòstic Diabetis-MCV. Estratificació RCV: Score2-Diabetis
- Prevenció i maneig de les MCV en diabètics
- Enfocament multifactorial i interdisciplinari

INSUFICIÈNCIA CARDÍACA I DIABETIS

Figure 14

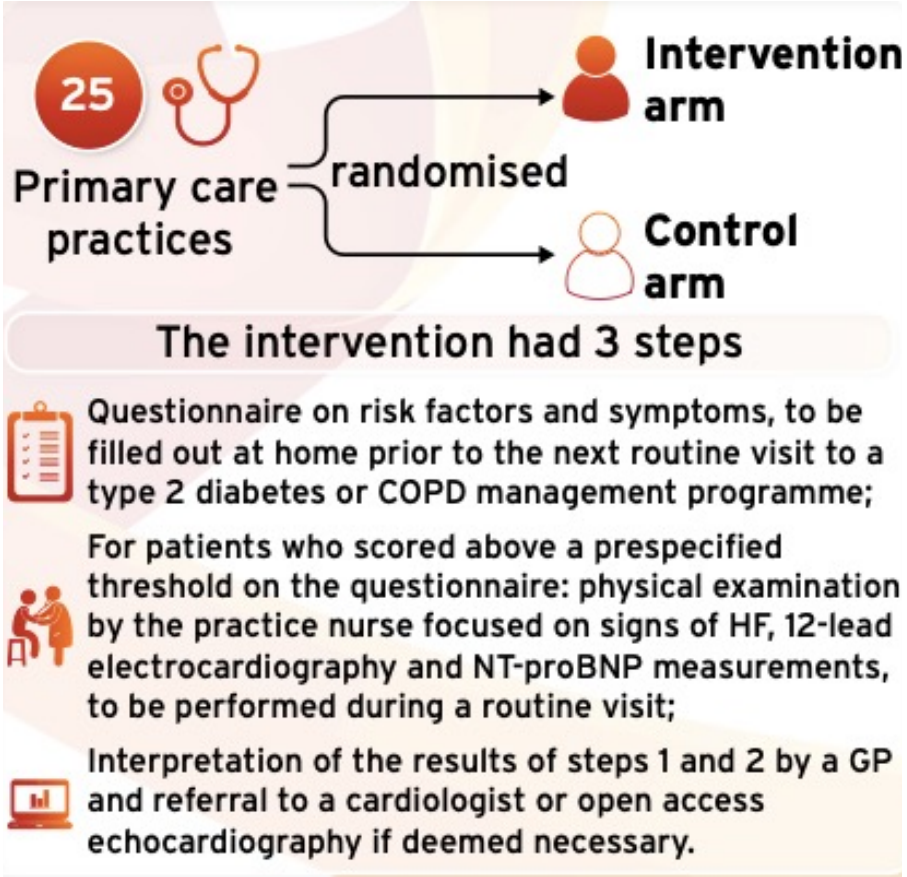


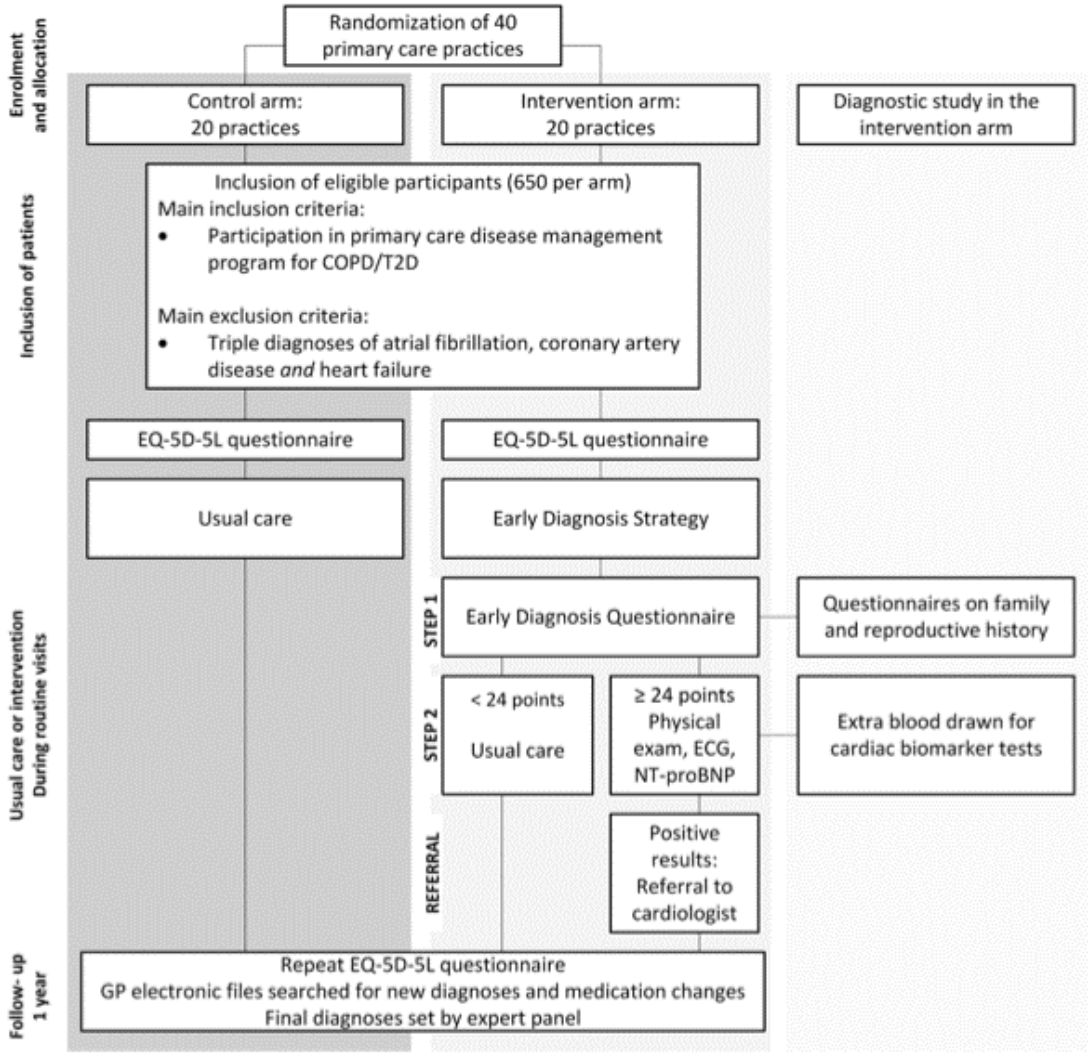
- La diabetis augmenta x 2-4 el risc d'IC.
- Infradiagnòstic d'IC en pacients diabètics.

- ES RECOMANA EN LES AVALUACIONS PERIÒDIQUES DELS PACIENTS AMB DIABETIS **PREGUNTAR SISTEMÀTICAMENT SOBRE SÍMPTOMES I SIGNES D'IC.**

Diagnostic yield of a proactive strategy for early detection of cardiovascular disease versus usual care in adults with type 2 diabetes or chronic obstructive pulmonary disease in primary care in the Netherlands (RED-CVD): a multicentre, pragmatic, cluster-randomised, controlled trial

Amy Groenewegen, Victor W Zwartkruis*, Michiel Rienstra, Nicolaas P A Zuithoff, Monika Hollander, Hendrik Koffijberg, Martijn Oude Wolcherink, Maarten J Cramer, Yvonne T van der Schouw, Arno W Hoes, Frans H Rutten†, Rudolf A de Boer†*





Amy Groenewegen et al.Diagnostic yield of a proactive strategy for early detection of cardiovascular disease versus usual care in adults with type 2 diabetes or chronic obstructive pulmonary disease in primary care in the Netherlands (RED-CVD): a multicentre, pragmatic, cluster-randomised, controlled trial. Lancet Public Health 2024; 9: e88–99

Table 1 Early Diagnosis Questionnaire (translated from Dutch) and scoring model for eligibility in intervention arm

	Score (for positive answers)	
Demographic variables	**COPD**	**T2DM**
1. Age per year, starting at 40	1	1
2. Male sex	9	9
3. BMI ≥30 kg/m^2	3	3
4. Current smoking	5	5
Questions	**COPD**	**T2DM**
1. In the past 3 months, have you experienced palpitations or an unpleasant pounding of the heart?	12	12
2. In the past 3 months, have you experienced any chest pain or discomfort while exercising? (eg, while hurrying or walking slightly uphill or bicycling)	4	4
3. In the past 3 months, were you troubled by shortness of breath while exercising? (eg, while hurrying or walking slightly uphill or bicycling)	NA	4
4. Do you experience more difficulties during exercise than you did three months ago?	3	3
5. Has your health caused you worries or stress during the last year?	4	4
6. Do you expect your health to get worse in the coming year?	3	3
7. In the past 3 months, have you experienced pain or a heavy feeling in your legs that occurred while walking and disappeared at rest?	2	2

Breathlessness during exercise (question 3) had insufficient discriminatory value in patients with COPD and was therefore considered not applicable (NA) in COPD participants in the intervention arm.
BMI, body mass index; COPD, chronic obstructive pulmonary disease; NA, not applicable; T2DM, type 2 diabetes mellitus.

	Intervention n=624 n (%; 95% CI)	Usual care n=592 n (%; 95% CI)
Heart failure	**28 (4·5%; 3·1–6·4)**	**9 (1·5%; 0·8–2·9)**
Heart failure with preserved ejection fraction	20 (3·2%; 2·1–4·9)	4 (0·7%; 0·2–1·8)
Heart failure with mildly reduced ejection fraction	5 (0·8%; 0·3–1·9)	4 (0·7%; 0·2–1·8)
Heart failure with reduced ejection fraction	3 (0·5%; 0·1–1·4)	1 (0·2%; 0·0–1·1)
Atrial fibrillation	**13 (2·1%; 1·2–3·6)**	**5 (0·8%; 0·3–2·0)**
New coronary artery dissease, all types	**16 (2·6%; 1·6–4·2)**	**8 (1·4%; 0·6–2·7)**
Obstructive coronary artery disease	8 (1·3%; 0·6–2·6)	7 (1·2%; 0·5–2·5)
Relevant, non-obstructive coronary artery disease	8 (1·3%; 0·6–2·6)	1 (0·2%; 0·0–1·1)
Any new cardiovascular diagnosis*	**50 (8·0%; 6·1–10·4)**	**18 (3·0%; 1·9–4·8)**

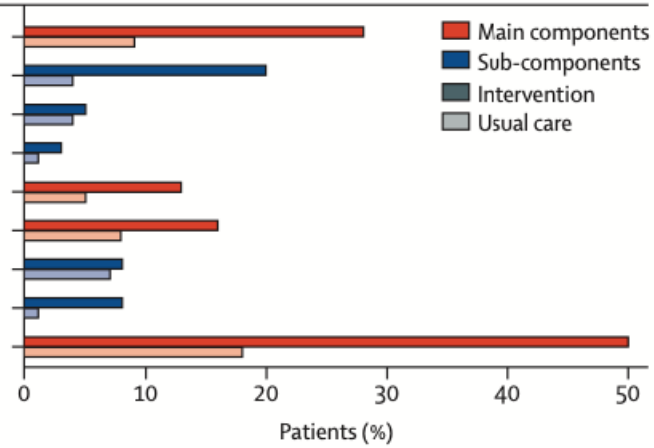


Figure 3: **Numbers of new cardiovascular diagnoses per group at 1 year of follow-up**
*The total number of patients with a new diagnosis is lower than the combination of the individual components because some patients received a double diagnosis. In the intervention group, 50 patients received 57 diagnoses and in the control group, 18 patients received 22 diagnoses.

RESULTATS

- El 70% dels pacients estaven simptomàtics quan van realitzar el qüestionari.
- No hi ha diferències en el tractament de les MCV en els dos grups.
- La MCV que més s'ha detectat és la IC amb FEVp
- **AQUESTA ESTRATÈGIA DIAGNÒSTICA DUPLICA EL DIAGNÒSTIC DE CI, IC I FA.**

FIND-HF:

Fatigue

Increased water accumulation

Natriuretic peptide testing

Dyspnoea

HF – heart failure

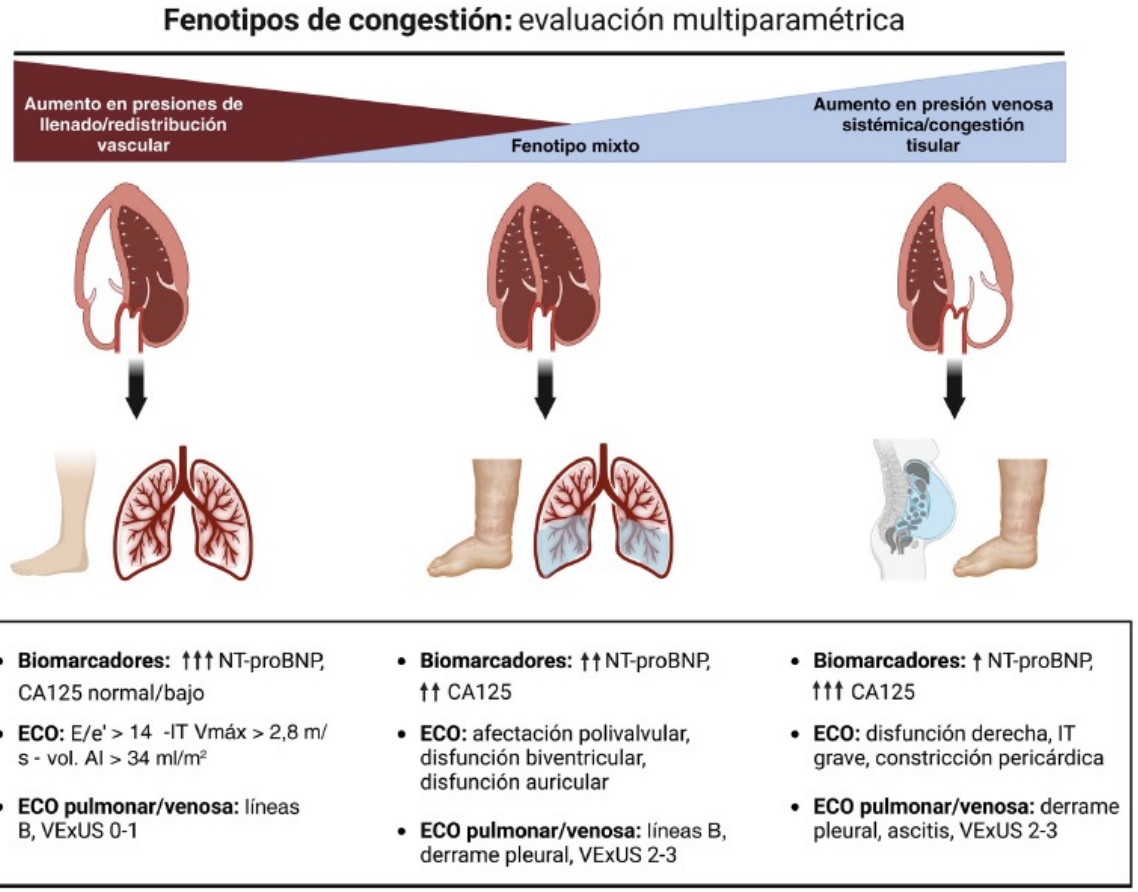
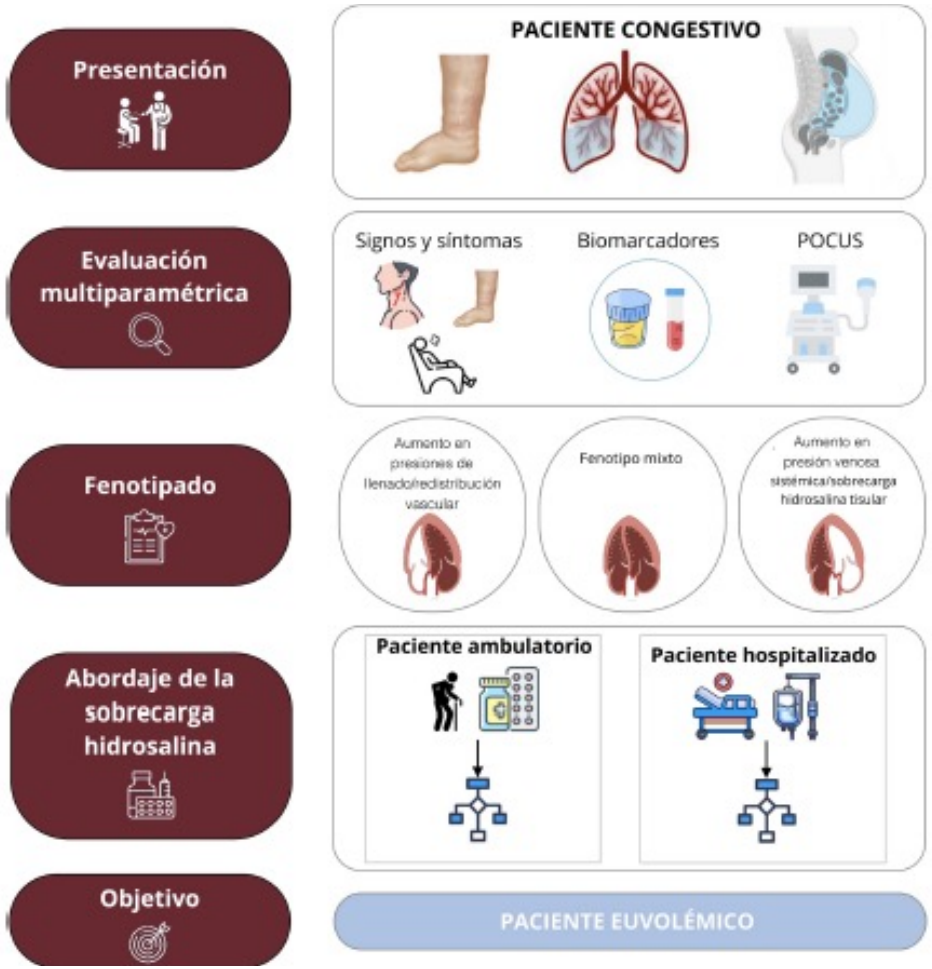


Figura 1. Fenotipos de sobrecarga hidrosalina. Evaluación multiparamétrica. CA125: antígeno carbohidrato 125; ECO: ecografía; IT: insuficiencia tricuspídea; NT-proBNP: fracción aminoterminal del propéptido natriurético cerebral tipo B; VExUS: ecografía de exceso venoso; $V_{máx}$: volumen máximo; vol. AI: volumen de la aurícula izquierda.

Bayes-Genis, A., et al. (2023), Practical algorithms for early diagnosis of heart failure and heart stress using NT-proBNP: A clinical consensus statement from the Heart Failure Association of the ESC. Eur J Heart Fail, 25: 1891-1898. https://doi.org/10.1002/ejhf.3036.

Llàcer P, et al. Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N. Rev Esp Cardiol. 2024. https://doi.org/10.1016/j.recesp.2024.01.003.

DIAGNÒSTIC INSUFICIÈNCIA CARDÍACA AGUDA



Revista Española de Cardiología
Available online 17 January 2024
In Press, Corrected Proof What's this?

Artículo especial

Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N.

Consensus on the approach to hydrosaline overload in acute heart failure. SEMI/SEC/S.E.N. recommendations

- MILLOR TRACTAMENT DE LA IC
- DETECCIÓ CONGESTIÓ RESIDUAL O SUBCLÍNICA
- BIOMARCADORS: PÈPTIDS NATRIÜRÈTICS, CA 125, HEMATOCRIT.
- DISPOSEM DE VIA ORAL, INTRAVENOSA I **SUBCUTÀNIA**

Llàcer P, et al. Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N. Rev Esp Cardiol. 2024. https://doi.org/10.1016/j.recesp.2024.01.003.

MANEIG DE LA SOBRECÀRREGA HIDROSALINA EN ÀMBIT AMBULATORI

Tabla 1
Grados de sobrecarga hidrosalina según un abordaje multiparamétrico

Variables	Euvolemia	Leve	Moderada	Grave
Variables clínicas				
Ortopnea	No	1 almohada	2 almohadas	Continua
IY, cm	<6	6-9	9-15	>15
Crepitantes	Ausente	Bases	<50%	>50%
Edemas	Ausentes	Tobillos	Rodillas	>Rodillas
Ascitis	No	Mínima, no requiere punción	Moderada, susceptible de punción	A tensión, requiere punción
Biomarcadores				
CA125, U/ml	<20	20-34	35-99	>100
BNP/NT-proBNP, pg/ml	<100/<300	100-400/300-1.800	400-2.500/1.800-10.000	>2.500/>10.000
Ecografía pulmonar				
Derrame pleural	Ausente	<1 cm	>1 cm	Atelectasia
Líneas B	Ausente	<3 líneas por campo	>3 líneas en menos de 2 regiones por pulmón afectadas	>3 líneas en 2 regiones por pulmón afectadas
VExUS	0	1	2	3

BNP: péptido natriurético cerebral; CA125: antígeno carbohidrato 125; IY: ingurgitación yugular; NT-proBNP: fracción aminoterminal del propéptido natriurético cerebral tipo B; VExUS: ecografía de exceso venoso.

*Llàcer P, et al. Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N. Rev Esp Cardiol. 2024. https://doi.org/10.1016/j.recesp.2024.01.003.

TRACTAMENT INSUFICIÈNCIA CARDÍACA AGUDA

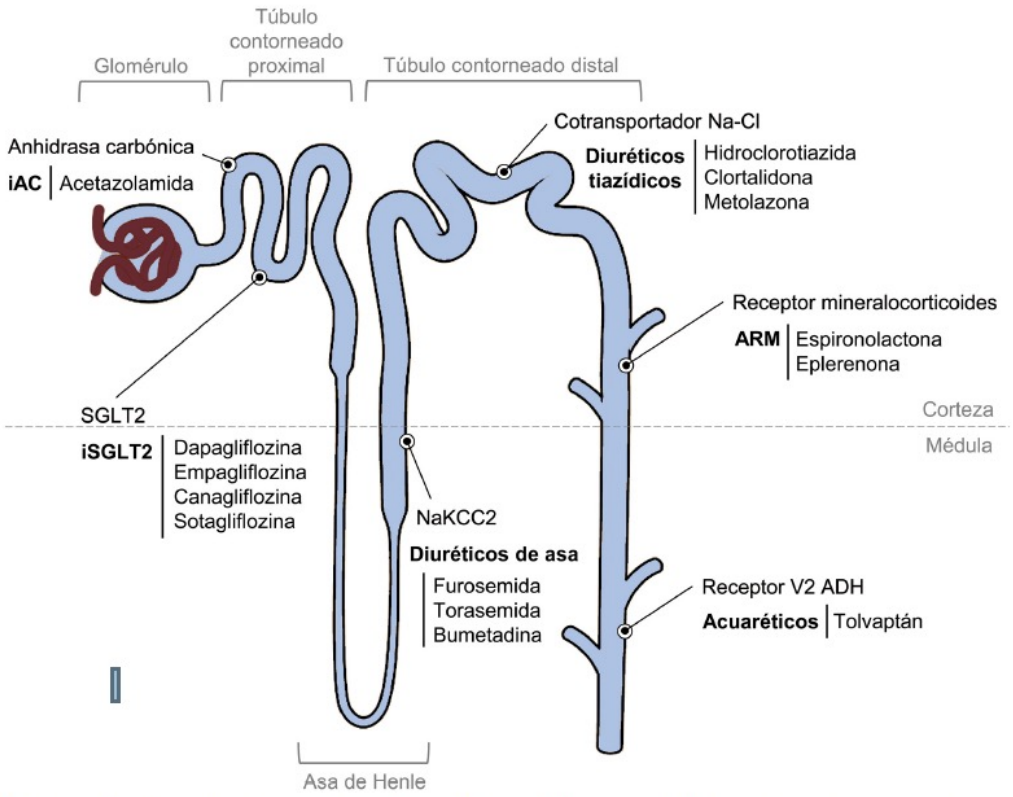


Figura 3. Mecanismos de acción y niveles en los que actúan los diferentes fármacos. ADH: vasopresina; ARM: antagonistas de los receptores mineralocorticoides; iAC: inhibidores de la anhidrasa carbónica; iSGLT2: inhibidores del cotransportador sodio-glucosa tipo 2; Na-Cl: sodio-cloro; NaKCC2: cotransportador sodio, potasio, dos cloros.

- **Estudi TRANSFORM-HF** no ha mostrat diferències significatives en la mortalitat total associades a tractament amb **torasemida** versus **furosemida**, en pacients ingressats per IC.

- **Estudi CLOROTIC**: la **hidroclorotiazida** incrementa la resposta descongestiva de la furosemida, augmentant la pèrdua ponderal en pacients ingressats per IC, però amb més hiperpotassèmia i deteriorament de la funció renal.
  - Un subestudi més recent mostra que el **tractament diürètic combinat amb tiazides és eficaç i segur en tot l'espectre de la funció renal.**

- **iSGLT2**: **es recomana a tots els pacients amb IC crònica i aguda**. A la fase aguda podrien iniciar-se a les primeres hores de la reagudització (beneficis pronòstics).

*Llàcer P, et al. Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N. Rev Esp Cardiol. 2024. https://doi.org/10.1016/j.recesp.2024.01.003.
*Mentz RJ, et al. Effect of torsemide vs furosemide after discharge on all-cause mortality in patients hospitalized with heart failure: The TRANSFORM-HF randomized clinical trial. JAMA.2023;329(3):214–223. doi:10.1001/jama.2022.23924
*Trullàs C, Morales-Rull JL, Casado J, et al. Combining loop and thiazide diuretics for acute heart failure across the estimated glomerular filtration rate spectrum: A post-hoc analysis of the CLOROTIC trial. Eur J Heart Fail. 2023;25:1784–1793.

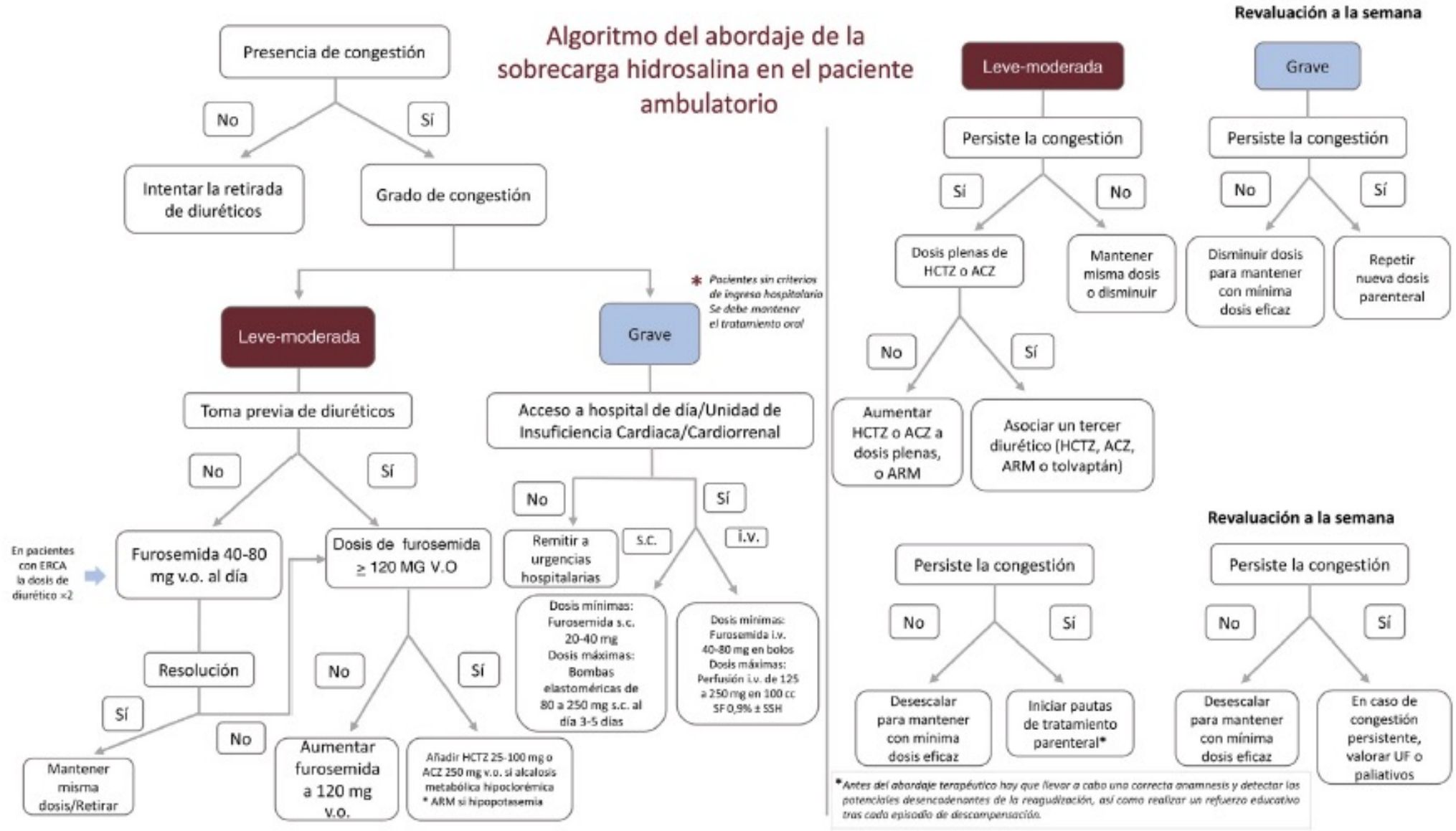


Figura 5. Algoritmo del abordaje de la sobrecarga hidrosalina en pacientes ambulatorios. ACZ: acetazolamida; ARM: antagonistas de los receptores mineralocorticoides; ERCA: enfermedad renal crónica avanzada; HCTZ: hidroclorotiacida; i.v.: intravenoso; s.c.: subcutáneo; SF: solución fisiológica; SSH: suero salino hipertónico; UF: ultrafiltración; v.o.: vía oral.

- Si no pren furosemida: 40-80 mg/dia i reavaluar a la setmana.

- Si pren <120 mg furosemida: augmentar fins 120 mg repartits en dues preses.
  >120 mg furosemida: bloquejar nefrona a altres nivells, afegint HCTZ, ACZ o ARM.

- PRIORITZAR TIAZIDA COM A SEGON DIÜRÈTIC

- Ajustar dosi HCTZ segons FG:
  - FG >50: 25 mg/dia
  - FG 20-50: 50 mg/dia
  - FG <20: 100 mg/dia

- Dosi inicial ACZ: 250 mg/dia v.o.
- Si descongestió efectiva precoç: retirar segon diürètic i mantenir dosi basal furosemida.

Tabla 2
Escenarios en los que se recomienda priorizar un tratamiento determinado

Escenario	Tratamiento que priorizar
Normonatremia	Tiacidas
Alcalosis metabólica hipoclorémica	Acetazolamida
Hipopotasemia	Antialdosterónicos (si FGE >30 ml/min/1,73 m^2)
Hiponatremia	Suero salino hipertónico Tolvaptán
Bajo gasto	Inótropos

FGE: filtrado glomerular estimado.

*Llàcer P, et al. Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N. Rev Esp Cardiol. 2024. https://doi.org/10.1016/j.recesp.2024.01.003.

Tabla 3
Acciones que realizar en la revaluación precoz

Variable	A los 7-14 días
Escala de congestión clínica	✔
POCUS	✔
VExUS	
LUS	
FGR, Na/Cl/K	✔
Hemograma	✔
CA125	✔
PN	✔
Iones en orina	✔
UACR	✔

CA125: antígeno carbohidrato 125; Cl: cloro; FGR: filtrado glomerular renal; K: potasio; LUS: ecografía pulmonar; Na: sodio; PN: péptidos natriuréticos; POCUS: ecografía a pie de cama; UACR: cociente albúmina creatinina en orina; VExUS: ecografía de exceso venoso.

REAVALUACIÓ PRECOÇ (7 DIES)

Tabla 4
Escala de congestión clínica

Variables	Euvolemia	Leve	Moderada	Grave
Ortopnea	No	1 almohada	2 almohadas	Continua
Ingurgitación yugular, cm	< 6	6-9	9-15	> 15
Crepitantes	Ausente	Bases	< 50%	> 50%
Edemas	Ausentes	Tobillos	Rodillas	> Rodillas
Ascitis	No	Mínima, no requiere punción	Moderada, susceptible de punción	A tensión, requiere punción

*Llàcer P, et al. Consenso sobre el abordaje de la sobrecarga hidrosalina en insuficiencia cardiaca aguda. Recomendaciones SEMI/SEC/S.E.N. Rev Esp Cardiol. 2024. https://doi.org/10.1016/j.recesp.2024.01.003.

ESC European Society of Cardiology
European Heart Journal (2023) 44, 3627–3639
https://doi.org/10.1093/eurheartj/ehad195
ESC GUIDELINES

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L'actualització en AP

2023 Focused Update of the 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure

Developed by the task force for the diagnosis and treatment of acute and chronic heart failure of the European Society of Cardiology (ESC)

With the special contribution of the Heart Failure Association (HFA) of the ESC

Recommendation Table 1 — Recommendation for the treatment of patients with symptomatic heart failure with mildly reduced ejection fraction

Recommendation	Class[a]	Level[b]
An SGLT2 inhibitor (dapagliflozin or empagliflozin) is recommended in patients with HFmrEF to reduce the risk of HF hospitalization or CV death.[c] [6,8]	I	A

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CV, cardiovascular; HF, heart failure; HFmrEF, heart failure with mildly reduced ejection fraction; SGLT2, sodium–glucose co-transporter 2.
[a]Class of recommendation.
[b]Level of evidence.
[c]This recommendation is based on the reduction of the primary composite endpoint used in the EMPEROR-Preserved and DELIVER trials and in a meta-analysis. However, it should be noted that there was a significant reduction only in HF hospitalizations and no reduction in CV death.

Recommendation Table 2 — Recommendation for the treatment of patients with symptomatic heart failure with preserved ejection fraction

Recommendation	Class[a]	Level[b]
An SGLT2 inhibitor (dapagliflozin or empagliflozin) is recommended in patients with HFpEF to reduce the risk of HF hospitalization or CV death.[c] [6,8]	I	A

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CV, cardiovascular; HF, heart failure; HFpEF, heart failure with preserved ejection fraction; SGLT2, sodium–glucose co-transporter 2.
[a]Class of recommendation.
[b]Level of evidence.
[c]This recommendation is based on the reduction of the primary composite endpoint used in the EMPEROR-Preserved and DELIVER trials and in a meta-analysis. However, it should be noted that there was a significant reduction only in HF hospitalizations and no reduction in CV death.

T.A. McDonagh, M. Metra, M. Adamo, et al. 2023 Focused Update of the 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart. Eur Heart J., 44 (2023), pp. 3627-3639. http://dx.doi.org/10.1093/eurheartj/ehad195

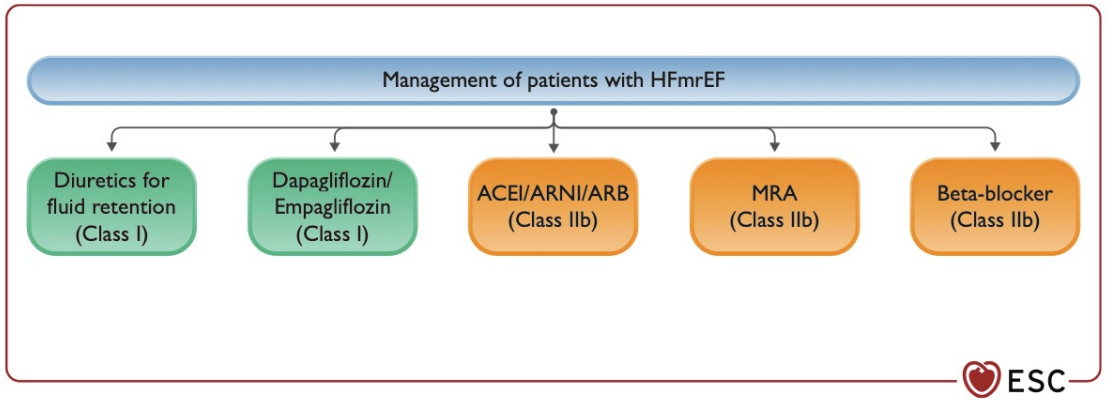


Figure 1 Management of patients with heart failure with mildly reduced ejection fraction. ACE-I, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; ARNI, angiotensin receptor–neprilysin inhibitor; HFmrEF, heart failure with mildly reduced ejection fraction; MRA, mineralocorticoid receptor antagonist.

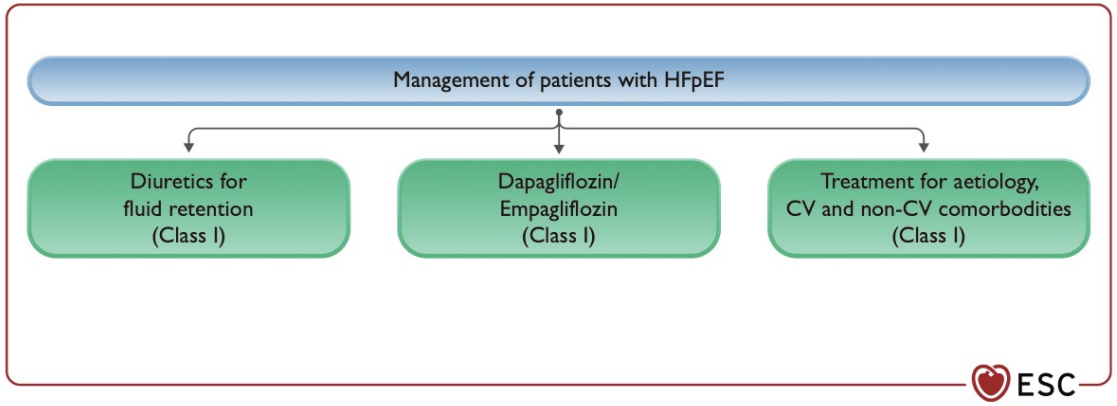
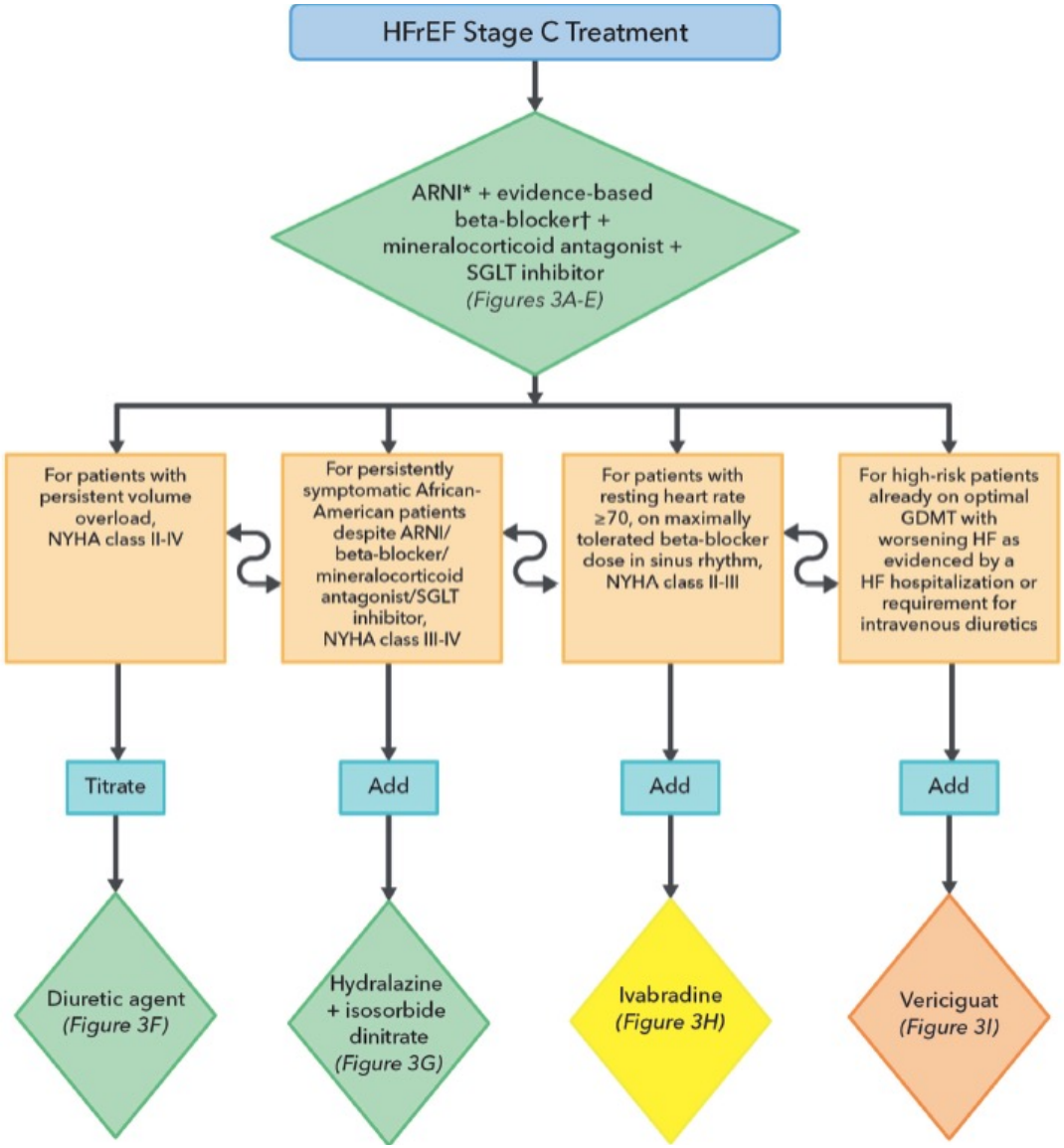


Figure 2 Management of patients with heart failure with preserved ejection fraction. CV, cardiovascular; HFpEF, heart failure with preserved ejection fraction.

- Els **diürètics** per la congestió i els **iSGLT2** (dapa/empagliflozina) passen a indicació **Classe I** en la **IC-FEmr i IC-FEp**

T.A. McDonagh, M. Metra, M. Adamo, et al. 2023 Focused Update of the 2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart. Eur Heart J., 44 (2023), pp. 3627-3639. http://dx.doi.org/10.1093/eurheartj/ehad195



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Journal of the American College of Cardiology
Available online 8 March 2024
In Press, Corrected Proof ⓘ What's this?

Expert Consensus Decision Pathway

2024 ACC Expert Consensus Decision Pathway for Treatment of Heart Failure With Reduced Ejection Fraction: A Report of the American College of Cardiology Solution Set Oversight Committee

- Assoliment dosi màxima **abans de 6 setmanes** per aconseguir benefici pronòstic (STRONG-HF)

Writing Committee, Maddox TM, Januzzi JL Jr, et al. 2024 ACC Expert Consensus Decision Pathway for Treatment of Heart Failure With Reduced Ejection Fraction: A Report of the American College of Cardiology Solution Set Oversight Committee. J Am Coll Cardiol. Published online March 2, 2024. Doi:10.1016/j.jacc.2023.12.024

- **Poca evidència** eficàcia de tractament d'IC en >80 anys: no s'inclouen als assajos.
- Malgrat això, es recomana quàdruple teràpia i l'assoliment de la dosi objectiu com a la resta de pacients: **VIGILÀNCIA ESTRETA** pels efectes adversos.
- De vegades caldrà **reduir dosi o desprescripció.**
- **Fragilitat** impacta negativament en el pronòstic i recomanen:
  - Quàdruple teràpia a dosi màxima tolerada.
  - **Suport nutricional i cognitiu** per millorar pronòstic.

Writing Committee, Maddox TM, Januzzi JL Jr, et al. 2024 ACC Expert Consensus Decision Pathway for Treatment of Heart Failure With Reduced Ejection Fraction: A Report of the American College of Cardiology Solution Set Oversight Committee. J Am Coll Cardiol. Published online March 2, 2024. doi:10.1016/j.jacc.2023.12.024

RESUMINT

- Infradiagnostic de la IC en pacients crònics: cribratge actiu
- Diagnòstic i tractament de la insuficiència cardíaca aguda:
  - Avaluació multiparamètrica
  - Fenotips de congestió
  - Maneig tractament diürètic a nivell ambulatori
- Comentaris del 2023 a les guies esc 2021 sobre maneig insuficiència cardíaca:
  - Canvis nivell evidència tractament IC-fEmr i IC-Fep
  - Consens experts març 2024 sobre maneig IC-FEr

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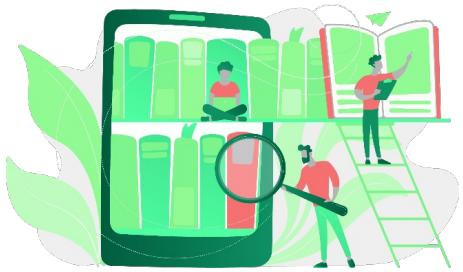

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