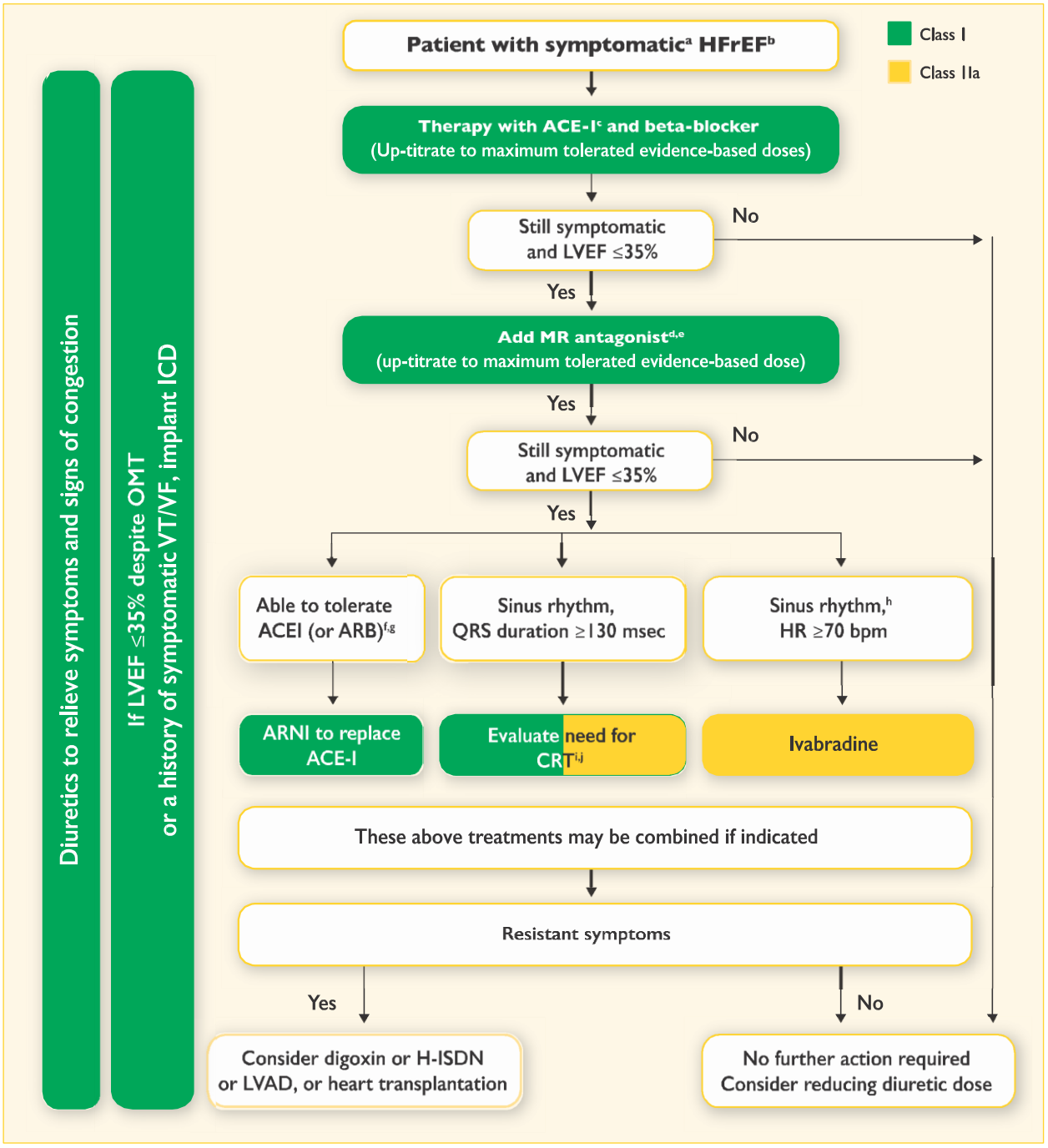

Figure 7.1 Therapeutic algorithm for a patient with symptomatic heart failure with reduced ejection fraction. Green indicates a class I recom- mendation; yellow indicates a class IIa recommendation. ACEI ¼ angiotensin-converting enzyme inhibitor; ARB ¼ angiotensin receptor blocker; ARNI ¼ angiotensin receptor neprilysin inhibitor; BNP ¼ B-type natriuretic peptide; CRT ¼ cardiac resynchronization therapy; HF ¼ heart fail- ure; HFrEF ¼ heart failure with reduced ejection fraction; H-ISDN ¼ hydralazine and isosorbide dinitrate; HR ¼ heart rate; ICD ¼ implantable cardioverter defibrillator; LBBB ¼ left bundle branch block; LVAD ¼ left ventricular assist device; LVEF ¼ left ventricular ejection fraction; MR ¼ mineralocorticoid receptor; NT-proBNP ¼ N-terminal pro-B type natriuretic peptide; NYHA ¼ New York Heart Association; OMT ¼ optimal medical therapy; VF ¼ ventricular fibrillation; VT ¼ ventricular tachycardia. [a]Symptomatic ¼ NYHA Class II-IV. [b]HFrEF ¼ LVEF ≤ 40%. [c]If ACE inhibitor not tolerated/contra-indicated, use ARB. [d]If MR antagonist not tolerated/contra-indicated, use ARB. [e]With a hospital admission for HF within the last 6 months or with elevated natriuretic peptides (BNP ≥ 250 pg/ml or NTproBNP ≥ 500 pg/ml in men and 750 pg/ml in women). [f]With an elevated plasma natriuretic peptide level (BNP ≥ 150 pg/mL or plasma NT-proBNP ≥ 600 pg/mL, or if HF hospitalization within recent 12 months plasma BNP ≥ 100 pg/mL or plasma NT-proBNP ≥ 400 pg/mL). [g]In doses equivalent to enalapril 10 mg b.i.d. [h]With a hospital admis- sion for HF within the previous year. [i]CRT is recommended if QRS ≥ 130 msec and LBBB (in sinus rhythm). [j]CRT should/may be considered if QRS ≥ 130 msec with non-LBBB (in a sinus rhythm) or for patients in AF provided a strategy to ensure bi-ventricular capture in place (individua- lized decision). For further details, see Sections 7 and 8 and corresponding web pages.

Evidence-based doses of disease-modifying drugs in key randomized trials in heart failure with reduced ejection fraction (or after myocardial infarction)

	Starting dose (mg)	Target dose (mg)
ACE-I		
Captopril[a]	6.25 *t.i.d.*	50 *t.i.d.*
Enalapril	2.5 *b.i.d.*	20 *b.i.d.*
Lisinopril[b]	2.5–5.0 *o.d.*	20–35 *o.d.*
Ramipril	2.5 o.d.	10 *o.d.*
Trandolapril[a]	0.5 *o.d.*	4 *o.d.*
Beta-blockers		
Bisoprolol	1.25 *o.d.*	10 *o.d.*
Carvedilol	3.125 *b.i.d.*	25 *b.i.d.*[d]
Metoprolol succinate (CR/XL)	12.5–25 *o.d.*	200 o.d.
Nebivolol[c]	1.25 *o.d.*	10 *o.d.*
ARBs		
Candesartan	4–8 *o.d.*	32 *o.d.*
Valsartan	40 *b.i.d.*	160 *b.i.d.*
Losartan[b,c]	50 *o.d.*	150 *o.d.*
MRAs		
Eplerenone	25 *o.d.*	50 *o.d.*
Spironolactone	25 *o.d.*	50 *o.d.*
ARNI		
Sacubitril/valsartan	49/51 *b.i.d.*	97/103 *b.i.d.*
***If*-channel blocker**		
Ivabradine	5 *b.i.d.*	7.5 *b.i.d.*

Doses of diuretics commonly used in patients with heart failure

Diuretics	Initial dose (mg)		Usual daily dose (mg)	
Loop diuretics[a]				
Furosemide	20–40		40–240	
Bumetanide	0.5–1.0		1–5	
Torasemide	5–10		10–20	
Thiazides[b]				
Bendroflumethiazide	2.5		2.5–10	
Hydrochlorothiazide	25		12.5–100	
Metolazone	2.5		2.5–10	
Indapamide[c]	2.5		2.5–5	
Potassium-sparing diuretics[d]				
	+ACE-I/	-ACE-I/	+ACE-I/	-ACE-I/
Spironolactone/ eplerenone	12.5–25	50	50	100–200
Amiloride	2.5	5	5–10	10–20
Triamterene	25	50	100	200