SUMMARY OF POTENTIAL DRUG-DISEASE INTERACTIONS IN THE SETTING OF CHF

Medication	Mechanism of adverse effect	Strength of evidence	Time to onset	Recommendation
Class I and II antiarrhythmics (except amiodarone and dofetilide)	Negative inotropic activity, proarrhythmic effects	12	Hours to months	Avoid the use of all class I antiarrhythmic drugs, and class III agents ibutilide and sotalol, in patients with CHF; consider amiodarone or dofetilide for patients with symptomatic or non-device-managed arrhythmias
Calcium channel blockers (CCB) (except amlodipine and felodipine)	Negative inotropic activity; neurohormonal activation	12	Average of 2 to 3 months on initiation	Avoid use of CCBs in patients with CHF (i.e., verapamil, diltiazem, nifedipine, nicardipinde, nisoldipine)
Minoxidil	Fluid retention; stimulation of the RAA system	10	2 to 4 weeks	Avoid use in patients with CHF
Anagrelide	Positive inotropic activity, tachycardia	10	Not well documented, appears dose related	Avoid, if possible, in patients with CHF
Cilostazol	Inhibition of phosphodiesterase III, resulting in ventricular tachycardia and premature ventricular complexes	10	Unknown	Do not use in patients with CHF
Rofecoxib	Sodium and water retention; hypertension, MI	8	Days up to 12 weeks	Avoid the use of Rofecoxib in patients with symptomatic CHF if possible; aspirin, 81-325 mg/d, should be used in patients with a history of risk factors for atherosclerotic cardiovascular or cerebrovascular disease
Amphetamines	Peripheral a- & b- agonist activity, tachycardia, arrhythmias	10	Unknown	Avoid use in patients with CHF
Thiazolidinediones	Fluid retention	7	Within 8 weeks of initiation	Actively monitor for new or increased CHF symptoms; avoid use in patients with NYHA class III and IV CHF
Licorice	Sodium retention, hypertension	7	Unknown	Avoid in patients with CHF
Metformin	Increased anaerobic glucose metabolism and subsequent elevated lactate levels	5	Anytime during therapy, partially dependent on renal function fluctuations	Avoid use in patients with CHF with New York Heart Association (NYHA) class III or IV symptoms and in those with a history of hospital admissions for CHF exacerbations; use with appropriate monitoring in all other patients with CHF
Beta-2 agonists	Direct positive chronotropic effect and hypokalemia promoting arrhythmias	5	Unknown	Avoid long-term systemic administration in patients with CHF; use inhaled route of administration and lowest effective dose
Clozapine	Unknown	4	Weeks to years	Actively monitor for new or increased CHF symptoms
Corticosteroids	Sodium and fluid retention	3	Days to weeks	Active monitoring for new or increased CHF symptoms; conservative use with the lowest doses needed for efficacy

Medication	Mechanism of adverse effect	Strength of evidence	Time to onset	Recommendation
Non-steroidal anti-inflammatory drugs (NSAIDs)	Sodium and water retention; blunted response to exogenous diuretics; increased systemic vascular resistance	3	Days up to 1 month	Avoid the use of NSAIDs in patients with symptomatic left ventricular dysfunction if possible; aspirin, 81-325 mg/d, should be used in patients with a history of risk factors for atherosclerotic cardiovascular or cerebrovascular disease
Itraconazole	Negative inotropic activity	3	Median, 10 days (range, 1-210 days)	Avoid administration for onychomycosis; use caution and increase monitoring for signs/symptoms of CHF in the treatment of systemic fungal infections
Ergot alkaloids	Increased serum norepinephrine levels; excess serotonin activity resulting in cardiopulmonary fibrosis	2	Immediate (increased norepinephrine levels); years (fibrosis)	Avoid use if possible in patients with CHF; if used, monitor regularly for new murmurs
Pergolide	Excess serotonin levels resulting in valvular fibrosis similar to ergot alkaloid toxicity	2	Years	Avoid use if possible in patients with CHF; thorough cardiovascular examination and possible echocardiogram if new or worsening murmur develops
Tri-cyclic anti-depressants (TCA)	Negative inotropic effects; increase in automaticity; slowing of intracardiac conduction; proarrhythmic properties	2	Weeks to years	Avoid if possible in patients with CHF; use other first-line agents for depression and neuropathy
Carbamazepine	Negative inotropic and chronotropic effects; suppression of sinus nodal automaticity and atrioventricular conduction; anticholinergic effects accelerating the formation of reentry circuits	1	Not well documented	Avoid if possible in patients with CHF; use other first-line agents for seizures, depression, and affective disorders