

# BRAUNWALD'S HEART DISEASE

A Textbook of Cardiovascular Medicine

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*Management*

Elliott M. Antman

David A. Morrow

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**PREHOSPITAL AND INITIAL MANAGEMENT, 1111****Management in the Emergency Department, 1113****Reperfusion Therapy, 1118****Fibrinolysis, 1119****Catheter-Based Reperfusion Strategies, 1126****Selection of Reperfusion Strategy, 1126****Anticoagulant and Antiplatelet Therapy, 1128****HOSPITAL MANAGEMENT, 1133****Coronary Care Units, 1133****Pharmacologic Therapy, 1135****HEMODYNAMIC DISTURBANCES, 1140****Hemodynamic Assessment, 1140****Left Ventricular Failure, 1142****Cardiogenic Shock, 1144****Right Ventricular Infarction, 1146****Mechanical Causes of Heart Failure, 1147****ARRHYTHMIAS, 1151****Ventricular Arrhythmias, 1151****Bradyarrhythmias, 1153****Supraventricular Tachyarrhythmias, 1155****Other Complications, 1156****Left Ventricular Thrombus and Arterial Embolism, 1158****Convalescence, Discharge, and Post-Myocardial Infarction Care, 1159****Risk Stratification After STEMI, 1159****Secondary Prevention of Acute Myocardial Infarction, 1162****EMERGING THERAPIES, 1165****REFERENCES, 1167****GUIDELINES, 1171**

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Braunwald's Heart Disease: A Textbook of ...

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Arrhythmias

- Ventricular Arrhythmias
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- Convalescence, Discharge, and Post-Myocardial Infarction Care
- Risk Stratification after STEMI
- Secondary Prevention of Acute Myocardial Infarction

Serum potassium levels and mortality in AMI

Incidence of SCD after ventricular fibrillation complicating AMI: a 5-year cause-of-death analysis of the FAST-MI 2005 registry

Value of early CMR for the prediction of adverse arrhythmic cardiac events after a first noncomplicated

## Atrial Flutter and Fibrillation

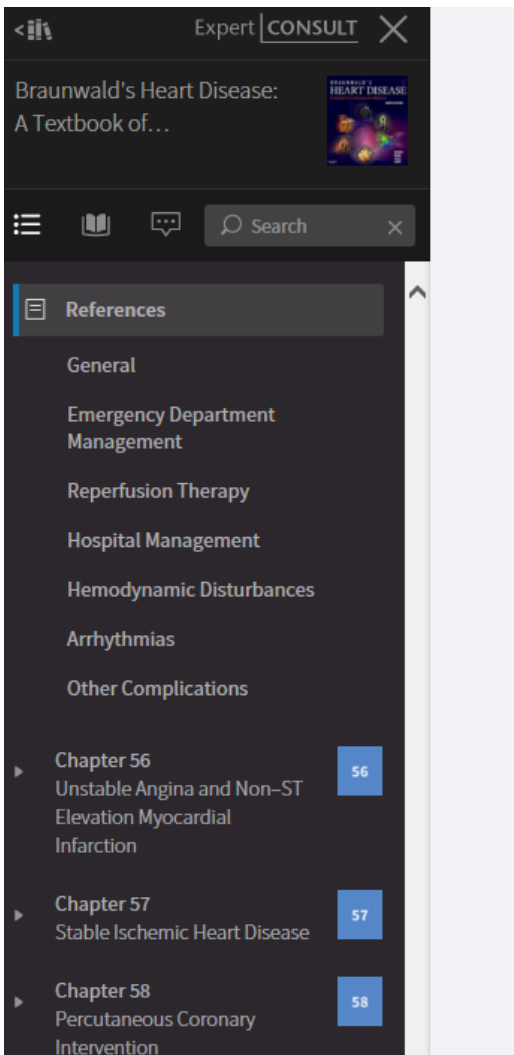
Atrial flutter is usually transient and, in patients with STEMI, is typically a consequence of augmented sympathetic stimulation of the atria, often occurring in patients with left ventricular failure, pulmonary emboli in whom the arrhythmia intensifies hemodynamic deterioration, or atrial infarction (see [Table 55-13](#) ).

As with atrial premature complexes and atrial flutter, fibrillation is usually transient and tends to occur in patients with left ventricular failure but also occurs in those with pericarditis and ischemic injury to the atria and right ventricular infarction.<sup>184</sup> The increased ventricular rate and loss of the atrial contribution to left ventricular filling result in a significant reduction in cardiac output. Atrial fibrillation during STEMI is associated with increased mortality and stroke, particularly in patients with anterior wall infarction.<sup>185</sup> However, because it is more common in patients with clinical and hemodynamic manifestations of extensive infarction and a poor prognosis, atrial fibrillation is probably a marker of poor prognosis, with only a small independent contribution to increased mortality.

## Management

Atrial flutter and fibrillation in patients with STEMI are treated in a manner similar to that in other settings (see [Chap. 40](#) ). Patients with recurrent episodes of atrial fibrillation should be treated with oral anticoagulants to reduce the risk of stroke, even if sinus rhythm is present at the time of hospital discharge, because no antiarrhythmic regimen can be relied on to be completely effective in suppressing atrial fibrillation. In the absence of contraindications, patients should receive a beta blocker after STEMI; in addition to their several other beneficial effects, these agents are helpful in slowing the ventricular rate if atrial fibrillation recurs. Digitalis may also be helpful in slowing the ventricular rate and managing ventricular dysfunction when atrial fibrillation develops after STEMI.<sup>186</sup>

## Other Complications



- heart failure or left ventricular dysfunction. *Eur J Heart Fail.* 8:591 2006 [PMID:16507350](#)
- 185 **Saczynski JS, McManus D, Zhou Z, et al.:** Trends in atrial fibrillation complicating acute myocardial infarction. *Am J Cardiol.* 104:169 2009 [PMID:19576341](#)
- 186 **Berton G, Cordiano R, Cucchini F, et al.:** Atrial fibrillation during acute myocardial infarction: Association with all-cause mortality and sudden death after 7-year of follow-up. *Int J Clin Pract..* 63:712 2009 [PMID:19392921](#)
- 187 **Keeley EC, Boura JA, Grines CL:** Primary angioplasty versus intravenous thrombolytic therapy for acute myocardial infarction: A quantitative review of 23 randomised trials. *Lancet.* 361:13 2003 [PMID:12517460](#)
- 188 **Kruk M, Kadziela J, Reynolds HR, et al.:** Predictors of outcome and the lack of effect of percutaneous coronary intervention across the risk strata in patients with persistent total occlusion after myocardial infarction: Results from the OAT (Occluded Artery Trial) study. *JACC Cardiovasc Interv.* 1:511 2008 [PMID:19194534](#)
- 189 **Fokkema ML, van der Vleuten PA, Vlaar PJ, et al.:** Incidence, predictors, and outcome of reinfarction and stent thrombosis within one year after primary percutaneous coronary intervention for ST-elevation myocardial infarction. *Catheter Cardiovasc Interv.* 73:627 2009 [PMID:19309712](#)
- 190 **Gueret P, Khalife K, Jobic Y, et al.:** Echocardiographic assessment of the incidence of mechanical complications during the early phase of myocardial infarction in the reperfusion era: A French multicentre prospective registry. *Arch Cardiovasc Dis.* 101:41 2008 [PMID:18391872](#)
- 191 **Jugdutt BI:** Cyclooxygenase inhibition and adverse remodeling during healing after myocardial infarction. *Circulation.* 115:288 2007 [PMID:17242292](#)