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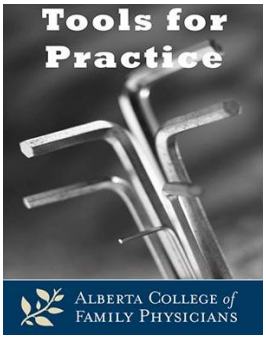
Reviewed: January 19, 2018
Evidence Updated: New meta-analyses, updated guidelines
Bottom Line: Unchanged
First Published: November 8, 2010



In atrial fibrillation: rate versus rhythm and how slow do you go?

Clinical Question: For patients with persistent atrial fibrillation (AFib), how does medically attempting to restore/maintain sinus rhythm compare to rate control (and what should be the target heart rate)?

Bottom Line: Patients with persistent Afib are more likely to benefit from rate control than rhythm control. Targeting resting heart rate to <80 does not appear necessary. Regardless of the treatment strategy, anti-thrombotic therapy is central to management.

Evidence:

- Rate versus rhythm: Two latest meta-analyses[1,2] of 10-13 Randomized Controlled Trials (RCTs) comparing pharmacological rate versus rhythm control in 7,867 patients:
  - Statistically significantly fewer hospitalizations:[1] 50.8% versus 58.3%, Number Needed to Treat (NNT)=14.
  - No difference in individual composite of embolic events, or individual outcomes of death, stroke or systemic embolism, worsening heart failure, or bleeding.[1,2]
  - Similar quality of life.[2]
  - Less likely to be in sinus rhythm (example from largest RCT:[3] 35% versus 63%).
- Strict versus lenient rate: RCT[4] (614 patients, mean age 68 years, 66% male, 61% CHADS score 0-1, followed up to three years) compared strict rate control (resting heart rate target <80) or lenient rate control (resting heart rate target <110). Lenient rate control was not inferior to strict rate control in:
  - Composite outcome of cardiovascular, bleed, and hospitalization (12.9% versus 14.9% [hazard ratio 0.84 (90% CI 0.58 to 1.21)].

Context:

- Although historically it was thought attempting to restore sinus rhythm was advantageous, medications used to establish and maintain sinus rhythm have several risks.
- Even in patients with coexistent congestive heart failure and AFib, mortality and morbidity outcomes did not differ between rate and rhythm groups.[5]

- Canadian guidelines recommend:[6]
  - Rate control for most patients;
  - Select patients may benefit from rhythm control, e.g. highly symptomatic, quality of life impairment, multiple recurrences, arrhythmia-induced cardiomyopathy.
- Regardless of treatment strategy, antithrombotic therapy is central to AFib management.[6]

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References:

1. Chatterjee S, Sardar P, Lichstein E, *et al*. PACE. 2013; 36:122-33.
2. Al-Khatib SM, Allen LaPointe NM, Chatterjee R, *et al*. Ann Intern Med. 2014; 160:760-73.
3. AFFIRM Investigators. N Engl J Med. 2002; 23:1825-33.
4. Van Gelder IC, Groenveld HF, Crijns HJ, *et al*. N Engl J Med. 2010; 362:1363-73.
5. Roy D, Talajic M, Nattel S, *et al*. N Engl J Med. 2008; 358:2667-77.
6. Verma A, Cairns JA, Mitchell LB, *et al*. Can J Cardiol. 2014; 30:1114-30.

Tools for Practice is a biweekly article summarizing medical evidence with a focus on topical issues and practice modifying information. It is coordinated by G. Michael Allan, MD, CCFP and the content is written by practising family physicians who are joined occasionally by a health professional from another medical specialty or health discipline. Each article is peer-reviewed, ensuring it maintains a high standard of quality, accuracy, and academic integrity. If you are not a member of the ACFP and would like to receive the TFP emails, please sign up for the distribution list at http://bit.ly/signupfortfps. Archived articles are available on the ACFP website.