

Baltimore Sleep and Wellness Center

Sleep Disordered Breathing and Obstructive Sleep Apnea
Blue Paper

Prevalence of Sleep Disordered Breathing and Obstructive Sleep Apnea

- Approximately 42 million American adults have Sleep Disordered Breathing (SDB) - T.Young NEJM 1993
 - ▶ 1 in 5 has mild Obstructive Sleep Apnea (OSA) and 1 in 15 has moderate to severe OSA.
- 9% of women and 25% men in the middle-aged working population have OSA. - Marshall Sleep 2008
 - ▶ OSA defined as AHI \geq 5
 - ▶ “Middle-aged” defined as 30-60-year-olds
- ~75% of severe SDB patients are not diagnosed - Young Sleep 2008

Clinical Features of Sleep Apnea

- ✓ Excessive daytime sleepiness
- ✓ Loud snoring
- ✓ Witnessed apneas
- ✓ Nocturnal choking and coughing
- ✓ Restless sleep/heavy sweating
- ✓ Intellectual deterioration
- ✓ Impotence
- ✓ Short-term memory loss
- ✓ Nocturia
- ✓ Atrial fibrillation
- ✓ Gastroesophageal reflux disease
- ✓ Arrhythmias

Sleep Apnea Risk Factors

- ✓ Obesity
- ✓ Male gender
- ✓ Increasing age
- ✓ Family History
- ✓ Alcohol or sedative use
- ✓ Anatomic abnormalities of the upper airway
- ✓ Smoking
- ✓ Endocrine and metabolic disorders

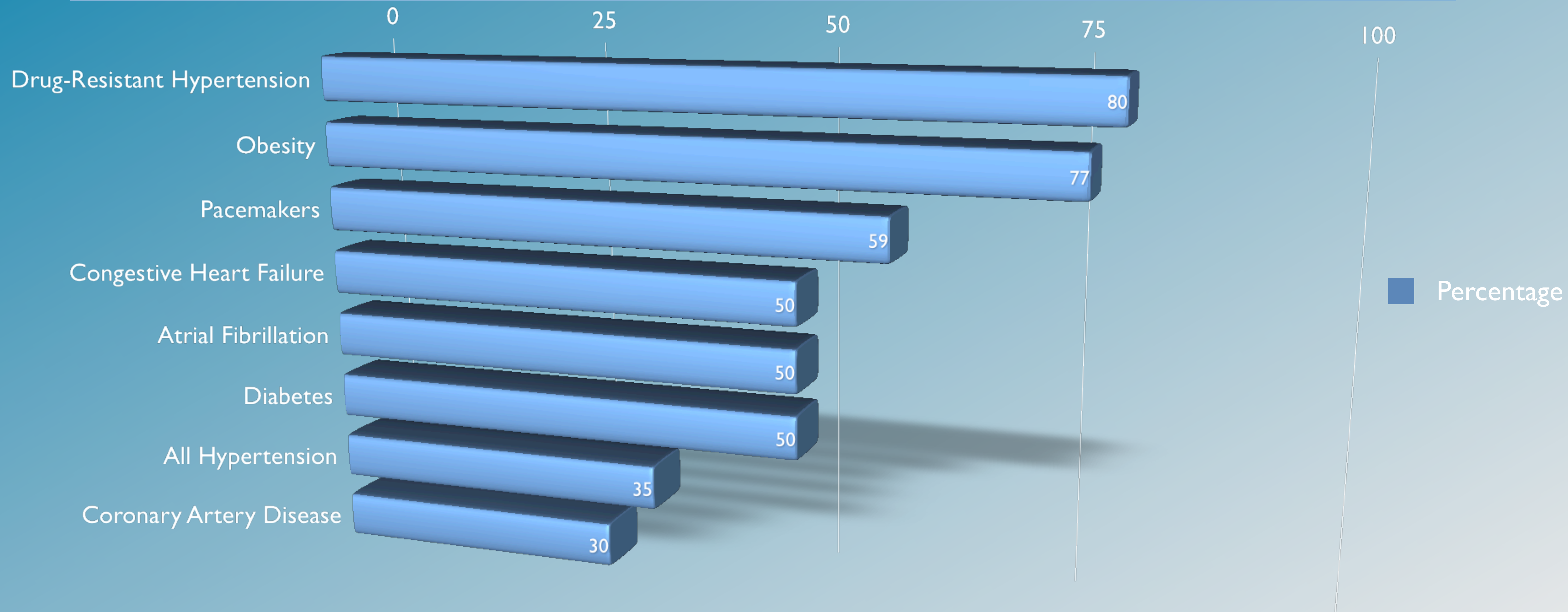
Obesity Severity Levels

Body Mass Index

- BMI 25-29: Overweight
 - 30% of children/adolescents -NCHS 1999-2002
- BMI 30-35: Obese
 - 40% have OSA -Vgontzas et al.Arch Intern Med 1994
- BMI >35: Morbidly obese
 - 77-98% have OSA



Sleep Apnea Prevalence in Comorbidities



Untreated OSA Patients Have a Higher Recurrence of Atrial Fibrillation

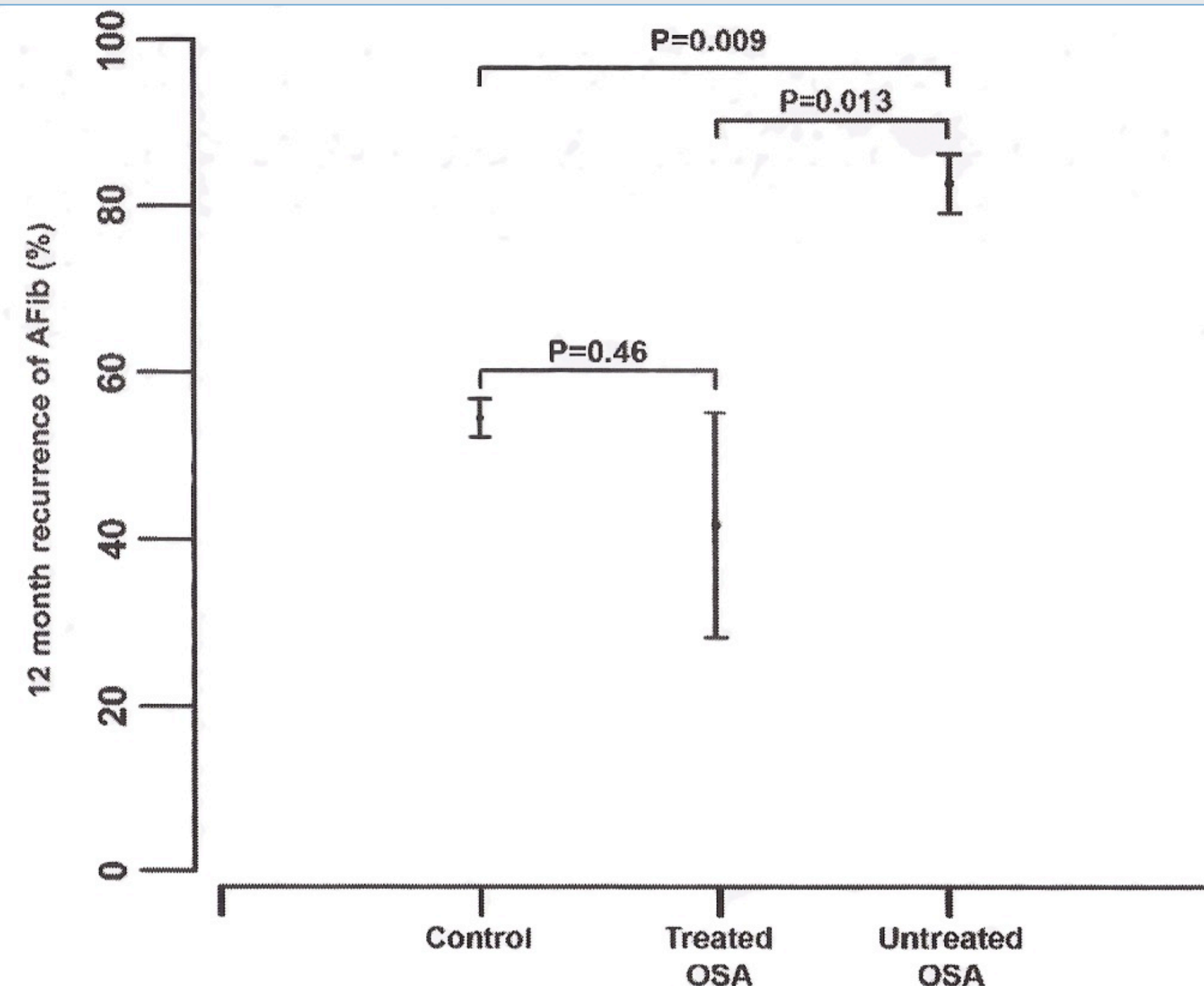


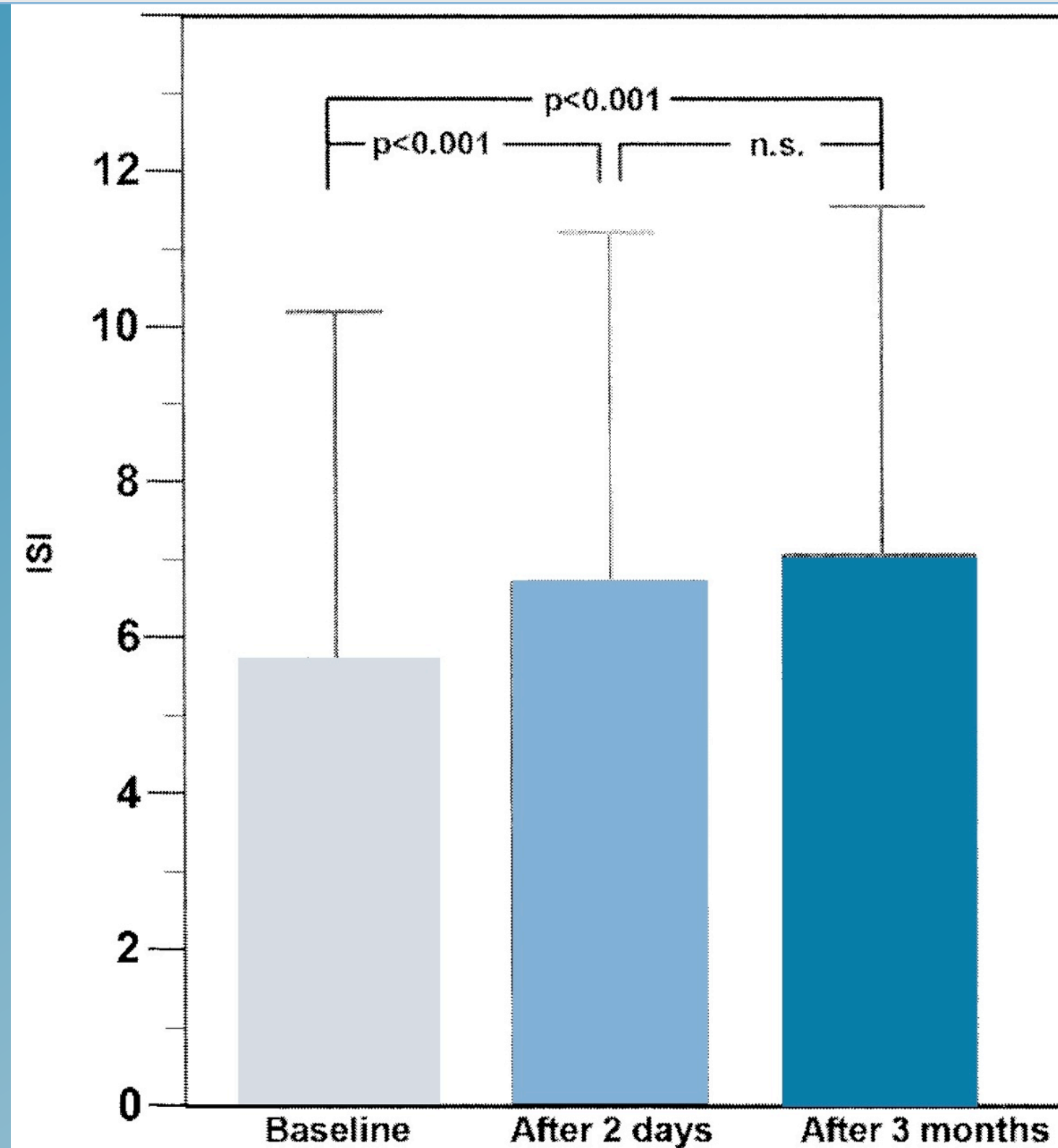
Figure 1. Recurrence of AF at 12 months comparing patients who did not have sleep studies (controls) with treated OSA patients and with untreated (including noncompliant) OSA patients (mean \pm SD).

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Circulation. 2003;107:2589-2594

CPAP May Improve Insulin Sensitivity



Shows improvement of insulin sensitivity index (ISI) at baseline, 2 days and 3 months after onset of CPAP treatment in 31 patients.

Harsch et al. *Am J Respir Crit Care Med.* 2004;169(2):156-162