UPDATE SLEEP APNEA

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No Conflicts of Interest to Disclose

Recognize and Treat
How to Follow

- Sleepy
- Hypertension
- Myocardial Infarction
- Stroke
- Diabetes
- Obesity
- Carcinoma
- Death

- How to Follow
  - Database
  - USE OF SMART CPAP
Physiological Consequences of OSA

- Intermittent Hypoxemia
  - ROS
  - Activates Systemic Inflammation
  - Increased vasoconstrictive endothelin-1
- Endothelial Dysfunction
  - NO
- Inflammation and Oxidative Stress
  - IL-8
  - CRP
  - TNF-alpha

Snoring

- An Independent Risk Factor for Carotid Atherosclerosis

Cardiovascular

- Ciccone, MM Respir Med May 2012
  - Intima-Media Thickness correlates with severity of OSA
- Respir Res March 2012
  - Intima-Media Thickness is Reduced in 6 Months with CPAP Treatment
Stroke

- Am J Resp Critical Care 2010
  - As AHI increase Risk of Stroke Increases
  - For Increase in One Increment of AHI There was a 6% increase of Stroke (in Men)
  - Association with Stroke in Women Identified Only With Severe OSA
- Chest 2005
  - CPAP Reduces Risk In 18 Months From 36 % to 6.7 %

Cardiovascular

  Major role for hypoxia inducible factor-1 and the endothelin system in promoting myocardial infarction and hypertension in an animal model of obstructive sleep apnea.

Cardiovascular Effect of CPAP

- Am J Respir Crit Care Med. 2007 Dec
  - Continuous positive airway pressure treatment of mild to moderate obstructive sleep apnea reduces cardiovascular risk.
Diabetes

- AM J Med 2009
  - OSA Increase Risk of DM Independent of Other Risk Factors
  - CPAP Attenuates This Risk

Neurocognitave

- Am J Respir Critical Care 2009
  - Neuroimaging studies Show White Matter Changes associated with Cognitave and Mood Changes

Neuro Psych

- Arch Int Medicine 2008
  - Robust Association Between SDB and Depression
- Neuroscience Letters 2008
  - High Resolution MRI Show Mammillary Bodies in Patients With OSA Were 20 % Smaller
Mortality

  - Cardiovascular mortality in women with obstructive sleep apnea with or without continuous positive airway pressure treatment: a cohort study.

OSA and Cancer

- Am J Respir Crit Care Med 185;2012
  - Obstructive Sleep Apnea And Cancer Mortality: Results From The Wisconsin Sleep Cohort Study
  - Desaturation (deoxygenation) and Resaturation (re oxygenation)

Mortality

  - Independently associated with modestly increased all-cause mortality in patients younger than 50 years after adjustment for major confounding factors.
How To Follow Patients on CPAP

- What Matters
  - Acceptance/Long-Term Use
  - Patient Compliance Data
  - My Compliance Data
Must Have Data on Patients

- Data Base/Spread Sheet

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Examples of Smart CPAP Data
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<th>Compliance Summary</th>
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<tr>
<td>Date Range:</td>
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<th>Deep Therapy Statistics (Philipa Raskonkos)</th>
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<tr>
<td>Average Dose in calories per kg: 50 cal</td>
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<td>Average Dose: 12.5</td>
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<td>Dose Interval: 2025 ml</td>
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