ESADA - The European Sleep Apnea DAtabase

Gothia Forum, 2009
OSA – obstruction of the upper airway

Sequele: Hypoxia, hemodynamic changes and sleep fragmentation
OSA – spectrum of morbidity

Daytime hypersomnolence
- QoL
- traffic and workplace accidents
- cognitive dysfunction
- loss of productivity

Cardiovascular disease

Metabolic disease
OSA and traffic accident

Retrospective/case-control studies

OR: 2.6-11.1

Young et al., Sleep 2008;31:1071-8
OSA – a treatable condition

With nCPAP

Without therapy
Open Clinical and Research Issues in OSA

• Large scale trials searching for intermediate pheno/genotype

• Improved methods for screening/diagnosis

• Outcome of disease and therapeutic intervention

• Impact of coexisting morbidity

Need for a large scale collaborative action
Initiative to join a European network of researchers.

Targets in OSA (action B26):

- to increase public and professional awareness,
- to create guidelines, and
- to initiate new research programs (EU FP7)
22 European sleep laboratories recruiting patients referred for suspected sleep apnea

Network of researchers representing 16 countries

3 additional laboratories (countries) joining in 2009
ESADA
- Project overview and management

Joint data base
University of Gothenburg

Recruiting
Centers

eCRF

Management group

Applications
Database management
Financial operation, sponsoring
Collaboration partners
Monitoring and QA of data base
Approval new protocols
Statistical analysis, data export
Publication strategy
Patients referred to sleep centre with clinically suspected OSA

No Sleep study

Sleep study

Diagnostic Work Up

No OSA

Diagnosis OSA

Treatment allocation

No treatment

CPAP

Surgery

Oral devices

Behavioural measures

Outcome F-U 1

Outcome F-U 2,3,...
Our goal is to generate a Pan European Sleep Laboratory Database for cross-sectional and outcome research in sleep apnea.

The Esada project uses a web based platform for collection of clinical data from patients referred to European sleep laboratories. Specific subcohort protocols linked to the database deal with pathophysiology, genetic mechanisms, neurocognitive impairment and cardiovascular disease in obstructive sleep apnea.
### Anthropometrics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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<tbody>
<tr>
<td>Height</td>
<td>179 cm</td>
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<tr>
<td>Weight</td>
<td>91 kg</td>
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<tr>
<td>BMI</td>
<td>28.4</td>
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**Sitting blood pressure:**

<table>
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<tr>
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<tbody>
<tr>
<td>Systolic</td>
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<tr>
<td>Diastolic</td>
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**Heart rate:**

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<th>Value</th>
<th>bpm</th>
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**Circumference:**

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<tr>
<td>Hip</td>
<td>101 cm</td>
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<tr>
<td>Neck</td>
<td>45 cm</td>
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ESADA report pages

- Anthropometrics
- Sleep habits, driving, tobacco, CGI
- Blood test data
- Medical history
- Drug treatment (ATC)
- Sleep study data
- F-U, details and effect of treatment, new events
- ...

Pt ID and labeled samples for genetic analysis stored locally
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ESADA – recruitment 2007-09

Quarterly

Accumulated

Nov. 1, 2009; 5394 recruited patients
ESADA – recruitment by center
ESADA current status

- Multinational platform for clinical trials and technical development
- Largest prospective data base in sleep medicine
- Transfer of technology and improved standards of care
- First cross sectional data analyses under compilation
- First genetic analysis planned for 2010-11
- Restricted study budget calls for FP7 application