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347. Clinical aspects of obstructive sleep apnoea

P3507

Validity and responsiveness of scale of quality of life to be used in the clinical practice in the SAHS

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Introduction: The health related quality of life (HRQL) tests used in sleep apnea and hypopnea syndrome (SAHS) are time consuming, which does not make their application easy in clinical practice.

Objective: To examine the validity and responsiveness of a new and simple Analogical Quality of Life Scale (AQLS) test for use in the clinical field.

Method: The subjects proceed from a cohort of SAHS patients treated with conventional CPAP for 12 weeks. The AQLS consists in a 12 cm straight line on which the patient had to indicate his or her health status related to the motive for consultation. We correlated the AQLS with other HRQL tests, Medical Outcome Survey (SF 36), Functional Outcomes in Sleep Questionnaires (FOSQ) and European Quality of Life Questionnaire (EuroQuol) and with other related clinical and polysomnographic measures, to concurrent and construct validities. The responsiveness by: 1) comparison of the values of HRQL test between before and after treatment and effect size calculation. 2) Association of the change with treatment between AQLS with other HRQL tests and the relationship between AQLS with clinical and polysomnographic parameters.

Results: At baseline the AQLS was correlated with all the HRQL tests but correlated better with FOSQ and the EuroQuol Thermometer. The AQLS and the FOSQ correlated better with clinical variables than the other HRQL tests. The AQLS captures changes in HRQL with treatment in a way similar to the FOSQ but better than the other HRQL tests.

Conclusion: The AQLS is a very simple test that measures HRQL in SAHS and its responsiveness to continuous positive airway pressure (CPAP). It could therefore prove to be a useful tool in clinical practice.

P3508

Quality of life determinants in patients with obstructive sleep apnea syndrome

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Aim: Was to analyze the factors that contribute to a decline in quality of life in patients with obstructive sleep apnea syndrome(OSAS).

Methods: We studied 161 patients with OSAS (apnea/hipopnea index(AHI)>10/h) diagnosed by nocturnal polysomnography, and that were submitted to the *Functional Outcomes of Sleep Questionnaire(FOSQ) test* at the date of initiation of positive pressure therapy. We have correlated the total score and the scores of different subscales-activity level, vigilance, intimacy, general productivity and social outcome (Pearson Correlation) with age, body mass index(BMI), Epworth Sleepiness Scale(ESS), diurnal PaO_2 $PaCO_2$ and data from polysomnography (total sleep time, sleep efficiency, sleep stages, arousal index, apnea/hypopnea index, minimal and average SaO_2, % of time with $SaO_2 < 90$ %, desaturation index, average duration of apnea/hypopnea, total duration of apnea/hypopnea). We then performed a stepwise multivariate analysis with the variables where we observed correlation.

Results: Impact on activity level-2.8±0.7; vigilance-2.4±0.9; intimacy-2.5±1.2; general productivity-3.1±0.7; social outcome-3.2±1.0; total FOSQ-14.0±3.7. In

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the multivariate analysis the models that included ESS,BMI,PaO_2 account for 27% of the impact in the activity level; ESS,PaO_2 explain 44.5% of vigilance changes; age,BMI,ESS-30% of intimacy changes; ESS,PaO_2,S_3+S_4-21.6% of the decline in general productivity; ESS,BMI-14.2% of social outcome; ESS, PaO_2,BMI,age-39.1% of decline in the quality of life as measured by FOSQ.

Conclusions: From our experience the factors that contributed to the highest decline in quality of life in patients with OSAS were excessiveness daytime sleepiness, obesity and hypoxemia.

P3509
Quality of life, frequency of anxiety and depresssion in obstructive sleep apnea syndrome
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Aim: To determine the prevalence of anxiety-depression and to eveluate the quality of life in OSAS.
Method: 'Epworth Sleepiness Scale' (ESS), 'Hospital Anxiety Depression Test', 'Medical Outcome Short Form 36' were applied to 80 patients who diagnosed OSAS by polysomnography. The duration of the most bothering complaints, comorbid diseases, smoking status, use of alcohol, history of previous depression were asked. Patients were divided in 2 groups (AHI⩽30 and AHI>30).
Results: 65 male, 15 female patients were evaluated and the mean age was 49.4±10.9. 41 cases had mild-moderate, 39 had severe OSAS. Mean AHI was 35.2±24.9. The most bothering symptom was snoring. The mean duration of symptoms was 5.6±6.2 years. Mean ESS was 7.8±5.6, ESS was ⩾10 (EDS) in 31.3% of the cases. 10 cases had a previous diagnosis as depression. 17 patients had anxiety (mean anxiety score; 6.4±4.2) and 21 cases had depression (mean depression score; 4.4±3.6). Vitality (p=0.007), social (p=0.013) and mental functions (p=0.018) were lower in patients with EDS. Anxiety (p=0.030) and depression (p=0.015) were more common in these patients. There were no difference EDS, anxiety, depression and quality of life according to severity of OSAS. Duration of symphtoms had no affect on depression and quality of life, but anxiety was more frequent in patients who had symphtoms ⩾5 years. Sleep efficiency had no affect on quality of life, anxiety, depression and EDS.
Discussion: Some symthoms of OSAS are associated with anxiety and depression. Several studies reported the associaton between OSAS and EDS, anxiety, depression and decrease quality of life. Our results are concordant with literature.

P3510
Chronic cough: a presenting symptom of obstructive sleep apnoea
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The three most common causes of chronic cough are: asthma, gastro-oesophageal reflux and rhinitis. In up to 25% of cases, the cause remains unclear after extensive investigations. We report 4 well-characterised patients referred to a general respiratory clinic with unexplained chronic cough who were subsequently found to have obstructive sleep apnoea (OSA). Subjects had a mean age of 59 years, cough duration 20 months, FEV_1 93% predicted, BMI 34 Kg/m^2 and 2 were males. 3 subjects had a productive cough and all complained of daytime and nocturnal cough. Subjects were investigated for chronic cough using a standardised protocol and the cough remained unexplained after investigations and treatment trials for common causes. The lack of clinical suspicion of OSA at presentation with cough led to considerable delays in diagnosis, being over 3 years in one patient. Subjects had a mean Epworth sleepiness score 13 and apnoea-hypopnoea index 49/hour. There was a significant improvement in mean cough visual analogue score (range 0–100mm) with nocturnal CPAP therapy (before 79mm vs after 1mm). All patients noticed an improvement in cough within 7 days of commencing CPAP therapy, resolution by 6 weeks and remained free of cough at 1year. There was a significant improvement in objective cough frequency and quality of life following CPAP in one patient where cough recordings were possible. Our preliminary series suggests an association between cough and OSA, supported by a rapid improvement with CPAP therapy. OSA should be considered as a potential cause in patients with unexplained cough. Further work needs to investigate the prevalence of coexistence of these common conditions and determine underlying mechanisms.

P3511
Obstructive sleep apnea (OSA) patients with a type-D personality experience increased fatigue
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Aims: Fatigue is highly prevalent in OSA, but little is known about the role of personality as a determinant of fatigue in this patient group. Type-D personality (increased negative emotions paired with their non-expression) is a risk factor for adverse health-outcomes, including fatigue, in cardiovascular disease (CVD). Since OSA patients are at risk for CVD, type-D personality may also be an important factor of individual differences in fatigue. We examined the prevalence of type-D personality in OSA and the impact of type-D on fatigue over a 2M period, using a prospective design.
Methods: 89 OSA (85.4% males; age 51±9; AHI 46±24) from the Antwerp University Hospital, participated. Patients completed the Type-D Scale (DS14) at the time of inclusion and the Fatigue Assessment Scale at inclusion and 2M follow-up.
Results: The prevalence of type-D personality was 36%. There was no change in fatigue over a 2M period (p=.96), nor was the interaction effect for time by type-D significant (p=.08), indicating that type-D personality exerted a stable effect on fatigue over time. However, type-D patients were more likely to experience increased fatigue compared to non type-D patients at the time of inclusion (28±7 vs. 22±7) and at 2 M (27±8 vs. 23±8; p=.005). We performed an ANCOVA for repeated measures, after correction for gender, age, and AHI. The impact of type-D on fatigue remained significant (p=.001), adjusting for these covariates.
Conclusions: Type-D personality exerts a stable, independent effect on fatigue over time. Personality factors should not be overlooked in the context of OSA, given that they may help identify patients at high-risk for adverse health-outcomes.

P3512
Obstructive sleep apnea as a cause of fatigue in multiple sclerosis
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Fatigue is a common symptom of Multiple Sclerosis (MS) and has been attributed to variable causes, including sleep disorders. The objective of this study is to determine the role of sleep disordered breathing and particularly Obstructive Sleep Apnea-Hypopnea Syndrome (OSAS) in the pathogenesis of fatigue in MS.
Ten MS patients (4 men-6 women, aged 47.9±8.7, BMI=26.57±4.48) who suffered from fatigue and 10 MS patients (5 men-5 women, aged 46±9.7, BMI=26.85±4.46) with no fatigue symptoms underwent attended overnight polysomnography study. The severity of fatigue was evaluated with the Modified Fatigue Impact Scale (MFIS).
Four out of ten patients with fatigue (40%) were diagnosed as having OSAS after overnight polysomnography study as confirmed by Apnea-Hypopnea Index [AHI] >10 (11, 15, 18, 28 respectively, mean 18±7.25) and in combination with nocturnal and daytime symptoms. None of the MS patients in the no fatigue group showed sleep disordered breathing.
In conclusion, OSAS may be a major factor contributing to fatigue in MS patients and polysomnography could be considered in cases with severe fatigue symptoms. Further investigation is necessary to ascertain the incidence of OSAS in MS and clarify the pathogenic processes involved.

P3513
Daytime sleepiness in patients with treated obstructive sleep apnea
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Introduction: Residual sleepiness in obstructive sleep apnea (OSA) patients (pts) treated with nCPAP has been addressed in treatment studies even though to date, there is no information available about the prevalence of sleepiness not attributable to other causes. Therefore, we performed a prospective study on sleepiness and its causes in these pts.
Methods: Between Nov 05 and Nov 06, all pts referred to our sleep disorders centre with a PSG-confirmed diagnosis of OSA and nCPAP-treatment were included in the study (V1). After 3 months, pts were reevaluated in the sleep lab (V2). If compliance (<20h weekly use) or treatment efficacy (AHI ⩾10) were unsatisfactory, these problems were addressed and a second reevaluation after 3 additional months was done (V2A). For all effectively treated pts who were still sleepy (ESS ⩾10), the causes of sleepiness were determined.
Results: 248 pts completed V1 and V2/V2A. 41 out of 248 pts (16.5%) exhibited an ESS ⩾10 at V2/V2A. After careful evaluation of each case by trained sleep physicians, 5 pts (2%, 95% CI 0.3–3.8%) were categorized to suffer from residual sleepiness. Other frequent reasons for persisting sleepiness in treated OSA were: behaviorally induced insufficient sleep syndrome (4.8%), persisting non-compliance (2.8%), shift work (1.6%), and PLMS (1.6%).
Conclusions: The prevalence of residual sleepiness in these pts seems to be low. Nevertheless, sleepiness in treated OSA pts is rather frequent. Causal treatment comes first, but in face of the potential consequences of sleepiness (accidents, quality of life), symptomatic treatment of sleepiness that can not be fully alleviated by causal treatment has to be an option for all affected pts.

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P3514
Validation of the Filipino version of the Epworth sleepiness scale

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The *Epworth Sleepiness Scale (ESS)* is a questionnaire that is currently the most utilized subjective test of daytime sleepiness in clinical practice. ESS is a standard, low cost, quick and easy to apply scale. It has been validated comparing to the gold standard of excessive daytime sleepiness which is Multiple Sleep Latency Test.
Objective: To validate the Filipino version of Epworth Sleepiness Scale as a tool for determining excessive daytime sleepiness among the general population
Methodology: The forward and backward translation method for bilinguals was applied. The translations were made by independent language experts. The Filipino translation was administered to 40 community urban dwellers and after 24 hours the English form was given to the same respondents. Testing for internal consistency was done by computing for the Cronbach's alpha. Construct validity was assessed using Chi square test and computation of the Cramer's Coefficient for each of the eight ESS questions.
Results: The Filipino translation of the ESS showed good internal consistency and reliability with a Cronbach's alpha of 0.57 ($p < 0.05$). The Cramer's coefficient for each of the questions between the English and Filipino version of the ESS showed acceptable construct validity of the Filipino version. (Cramer's coefficient, 0.35–0.68 $p < 0.05$)
Conclusions: The Filipino version of the ESS showed satisfactory internal consistency and construct validity. This translation can now be used as a tool to elucidate the patterns of daytime sleepiness among the Filipino population. It can be an effective modality in areas with little access to sleep laboratories in screening patients needing further work up for sleep-related disorders.

P3515
Comparison of subjective und objective tests of sleepiness in obstructive sleep apnea syndrome (OSAS)

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Background: Daytime sleepiness in OSAS can be characterized by the Epworth Sleepiness Scale (ESS). Further relatively objective methods are available such as MSLT and MWT as well as computer assisted tests measuring performance like the vigilance test of Quatember & Maly (Q&M), sustained attention test CARDA and pupillographic sleepiness tests. The reading test is a newly developed instrument which measures sleepiness with high relation to reality.
Aim: To compare the ESS-score with the results of the 4 tests specified above in order to evaluate the external validity.
Method: 6 female and 34 male patients, mean age 54.4±11.7 years with OSAS, were examined with average BMI 31.9±6.6, ESS-score 9.8±4.7, AHI 44.7±22.1). Prior to the diagnostic night the patients completed the ESS and performed all 4 test procedures. When reading a book, vigilance can be measured by counting the number of rapid eye movements. Reading activity and sleep latency thus can be evaluated by EEG, EOG and submental EMG according to R&K.
Results: Compared to sleepiness measured with the ESS-Score (abnormal results set at a level of 11 or higher) the tests with the highest sensitivity und specificity are Q&M (61.9 %/ 72.2%) and the newly developed reading test (61.9 %/ 73.6 %).
Comparing the reading test with Q&M regarding pathological deviation only 16 of 39 results corresponded.
Conclusions:: Subjective sleepiness, measured by the ESS correlates only partially with the reading test or the vigilance.test of Quatember und Maly (Q&M). The discrepancy of results when reading in comparison to performing a reaction test (Q&M) can be explained by different levels of activation.
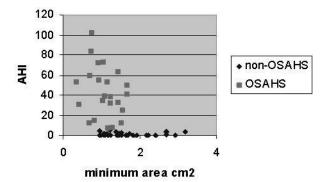
P3516
Oropharyngeal junction area as a predictor of obstructive sleep apnoea

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Background: Obstructive Sleep Apnoea (OSA) is a common sleep disorder with a large demand for diagnostic tests and long waiting lists. We observed that only 35% of our patients undergoing polysomnography were diagnosed as OSA. Reduced upper airway size is associated with OSA. We undertook a pilot study to determine if a minimum area at the oropharyngeal junction (OPJ) could be used as a screening test for OSA.
Methods: 52 male patients referred for sleep disordered breathing assesment had measurements of minimum cross-sectional area at the oropharyngeal junction taken by acoustic pharyngometry prior to polysomnography (PSG). Following analysis of the PSG the relationship between the OPJ measurements in the OSA (AHI>5events/hr) group (n=22) and the non-OSA (AHI<5events/hr) group(n=30) was compared.

Results: Using a minimum area at the OPJ of $<1.7^2$ as an indication for PSG yeilds a sensitivity of 100% and a specificity of 38%.

Conclusion: Using a OPJ minimum area cut-off point of $1.7cm^2$ has the potential to reduce the numbers of negative PSG studies by about one third, thus leading to reduced waiting lists for those with OSA and optimising the use of limited clinical resources. We recommend further studies on a larger population group.

P3517
The role of Mallampati score in obstructive sleep apnea syndrome (OSAS)

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Introduction: Craniofacial alterations are considered as a risk factor for developing OSAS. Among them, we can highlight the Mallampati score which normally is used for quantifying the difficulty for orotracheal intubation. Last studies have shown the correlation between the diagnostic of OSAS and high Mallampati score however there are still doubts about its role to stratify the severity of OSAS.
Objective: The aim of this study was to verify the association between Mallampatti score and OSAS' severity.
Methods: We evaluated 62 patients from June to November 2006 through the standard procedures of multidiscipline team when we attributed the Mallampati score for these patients. All of the polysomnography studies were accomplished after the first consultation. The Apnea/Hypopnea Index (AHI) was correlated with Mallampati score by the Pearson's Correlation ($p < 0.05$). It was considered for first analysis just one group of patients and afterwards two groups separated by gender.
Results: While we've considered just one group, we could observed a poor correlation between AHI and Mallampatti Score (r=0.349 p=0.005). However, while the data has been analyzed for each group, we have found a good correlation for Male Group (n=28; r=0.616 p<0.001) and haven't found any correlation for Female Group (n=34; r=0.222 p=0.207).
Conclusion: These data suggest that the Mallampati score can be an important predictor factor for stratify the severity of OSAS in male gender.

P3518
The incidence and determinants of sleep apnea syndrome in patients with spinal cord injury and stroke

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Objective: To determine the amount of patients with stroke and spinal cord injury having sleep apnea during their clinical stay in a rehabilitation centre and to assess the determinants of sleep apnea in this group.
Methods: Sleep Apnea Hypopnea Index was determined in 30 patients with spinal cord injury and 65 patients with stroke and related to age, Body Mass Index (BMI), Epworth Sleepiness Scale and Desaturation Index (DI).
Results: 33/65 (50.8%) of the stroke patients and 8/30 (26.7%) of the patients with spinal cord injury had an Apnea Hypopnea Index (AHI) ⩾ 15, defined as sleep disordered breathing, combined with a Apnea Index (AI) of 5 or more, diagnosed as a sleep apnea syndrome. Regression analyses showed no significant correlation between AHI and EPSS score in both groups. There was a significant correlation between AHI and DI of 0.944 (p=0.000) in both groups. There was a significant correlation between AHI and BMI (p=0.028) as well as AHI and age (p=0.007) in the group of stroke patients. There was no significant correlation between AHI and BMI as well as AHI and age in the group of spinal cord injury. Most of the apneas where characterized as obstructive in both groups.
Conclusion: Incidence of SAS is high in patients with stroke (50.8%) and spinal cord injury (26.7%). The best predicting factor for having sleep apnea syndrome is the Desaturation Index, easy to determine during overnight pulse oximetry.

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P3519
Sleep disordered breathing and lung function in myotonic dystrophy
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Introduction: Steinert's myotonic dystrophy (MD) may affect respiratory muscles
and result in ventilatory failure, which are common causes of morbidity and
mortality. Since the description of the defective gene responsible for MD, a triplet
of the CTG nucleotides, many studies have suggested a relationship between
number of repeats of abnormal triplet and severity of clinical manifestations.
Objectives: To evaluate lung function impairment and sleep disordered breathing
in MD patients and the impact of the genetic defect.
Material and Methods: Retrospective analysis of 27 MD patients, diagnosed
by neurological and neurophysiological examination and genetic study. Pulmonary
evaluation consisted on spirometry, lung volumes, respiratory pressures, ABG and
home sleep study.
Results: In the studied population, with median age of 40 yrs, 15 were females.
Their median number of triplet repeats was 600. Median $paCO_2$=45.2mmHg,
median paO_2= 80.5 mmHg, median FEV1=2.2 L, median FVC=2.5 L, median
TLC=3.9 L, median MIP=54 cmH_2O, median MEP=47.5 cmH_2O and median
PCF=330 L/min. Fifty nine percent had apnea-hipopnea index (AHI)>5/h, median
AHI=10/h and median T90=10%. We found a negative correlation between
number of triplet repeats and pulmonary function (correlation with FEV 1 was
statistically significant) and a positive correlation between number repeats and
sleep impairment (correlation with T90 was statistically significant).
Conclusion: In our group of patients there is an association between magnitude of
triplet repeats and severity of pulmonary function and sleep disordered breathing.
This may be useful in predicting pulmonary involvement in those patients.
Key words: Myotonic dystrophy. Genetic study. Pulmonary function.

P3520
**The prevalence of sleep-disordered breathing in patients with amyotrofic
lateral sclerosis is not predicted by daytime pulmonary function**
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Lung function deterioration, impairment of nocturnal ventilation, and death due
to respiratory failure are common in patients with end-stage amyotrophic lateral
sclerosis (ALS). This study aimed to determine whether or not a correlation
exists between the severity of sleep-disordered breathing (SDB) and daytime
pulmonary function in patients with ALS. A group of 39 patients with ALS
(13 F, 56.5±2.8 yrs, 2 bulbar) underwent pulmonary function evaluation and
full standard nocturnal polysomnography (Compumedics S-Series) in our sleep
lab. Mean (±SE) % of predicted FEV1 and FVC in the whole group were
64.2±2.8% and 63.8±3.8%, respectively, whereas the mean arterial PaO_2 and
$PaCO_2$ (mmHg) were 83.4±3.4 and 41.4±1.8, respectively. In 89.2% of patients
the apnea-hypopnea index (AHI) was >5 (cut-off for defining the presence of sleep
apnea). In these patients the mean AHI, the mean nocturnal SaO_2 ($mSaO_2$) and
the D-SaO_2 were respectively: 25.5±2.8, 92.7±0.5% and 4.0±0.3%. We found
no correlation between AHI and FEV1, FVC or diurnal PaO_2 and $PaCO_2$. The
nocturnal $mSaO_2$ as expected, inversely correlated with AHI (P < 0.05) without
correlation with the diurnal values of blood gases or any other parameter.
We conclude that moderate to severe SDB, which is extremely common in patients
with ALS, cannot be predicted by diurnal spirometric or arterial blood gases
abnormalities. Factors other than impaired ventilation are likely to be involved in
the pathogenesis of SDB in ALS patients.

P3521
Sleep study in obesity pacients class III with bariatric surgery indication
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The obesity is currently one of the most serious problems of public health. When
the body mass index (BMI) ⩾40 kg/m^2, the obesity passes to be considered a
serious illness, the high frequency of association with illnesses that are caused
or aggravated for itself, determines the degree III obesity, also called of morbid
obesity. The factor of more important risk for obstructive sleep apnea is the
obesity, mainly with the accumulation of fat in the high portion of the abdomen
and neck. The weight loss through surgical treatments, seems to more optimize
the treatment of the respiratory sleep disturbs. The data included the history of
the current disease, the BMI, The Epworth Scale of Sleepiness (ESS), sleep study
through basal complete nocturnal polyssonography and cervical and abdominal
cirtometries, being that 6 patients had repeated the collections 2 months after
the surgery. The antropometrics results: IBM 52.78±7.71; age 36.07±10.97;

neck circunference 42±4.74; abdominal circunference 141.07±19.59. The ESS
was 50% normal; Apnea-hypopnea index (AHI) was ⩾15 in 65%. The AHI
presented positive correlation with abdominal and neck circunferences; the BMI
presented correlation with neck circunference and AHI. The average of weight
loss in 13% was statistically significant to improves the BMI, AHI, abdominal
and neck circunference and heart rate during sleep. We conclude that the degree
III obesity takes respiratory sleep disturbs, mainly when we have association with
the increase in neck and abdomen circunferences ; and the weight loss, even that
small, in these individuals takes the improvement in the antropometrics values
and polyssomnography variables. Grants: FAPESP.

P3522
Saw-tooth pattern during flow-volume curve is highly indicative for OSAS
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The obstructive sleep apnoea/hypopnoea syndrome (OSAS) is an important clin-
ical syndrome which seriously can compromise individual health. It is described
that OSAS patients may perform flow volume curves displaying a typical saw
tooth pattern during the inspiratory as well as the expiratory phase of the curve
or in both phases. The aim of the present study was to assess the incidence of
these findings in the outpatients investigated in our Division. Retrospectively we
examined spirometry and flow-volume curves of 8142 outpatients. Lung function
tests results were regarded as normal in 4508 and impaired (obstructive/ restrictive
syndrome) in 3287. Of them, 220 were suffering from OSAS. Saw-tooth pattern
in flow-volume curves was recognized in the presence of almost three or more
oscillations with an amplitude of 50 to 500 ml/s and a maximum width of 10% of
FVC, occurring at regular interval. Only 60 outpatients (48 male and 12 female,
age range 49.9±15.5) performed a saw-tooth curve. They had a median body
mass index of 29.1±8.5, 28 had saw tooth findings in the expiratory phase, 7
during the inspiratory phase and 6 in both. All of them underwent nocturnal
polysonnography and they showed an apnea/ hypopnea index very high (AHI=
55.93±24.85). Considering all the OSAS patients, saw tooth pattern display a high
specificity (100%) but a low sensibility (27%) in recognizing patients with this
syndrome. Our data indicate the opportunity to perform more specific assessment
(PSG) for diagnosis of OSAS in patients showing saw-tooth pattern during flow-
volume curve.

P3523
**Validation of signal quality in a new ambulatory polysomnography system:
Somnocheck2 R+K**
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Introduction: Cardiorespiratory polysomnography is probably the most important
procedure in sleep medicine, using the overnight conduction of different biological
signals (e.g. EEG, EOG, EMG and ECG) and their analysis to determine different
sleep parameters. Due to economic considerations, ambulatory polysomnogra-
phies become more and more interesting, resulting in the development of the
Somnocheck2 R+K device.
Methods: To ensure the usability of this device with regard to standard
polysomnographic analyses, an expert quality assessment and a comparison
of automatic (ARTISANA) and visual analysis of sleep parameters has been
performed in 10 consecutive recordings from 3 different sleep centres.
Results: Expert rating of the polysomnographic recordings showed a good
signal quality of all signals required for sleep analysis. The comparison between
automatically and visually performed sleep analyses are currently in progress and
will be presented during the conference.
Conclusions: The Somnocheck2 R+K proved to provide sufficient signal quality
for the analysis of its polysomnographic recordings with standard procedures.
Therefore it seems possible to use the device to make clinical investigations and
come up with substantiated clinical decisions.

P3524
A case with sleep apnea and Treacher Collins syndrome
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We present a case with Treacher-Collins syndrome and medium weight sleep
apnea.
Treacher Collins syndrome is a mandibulofacial disostosis syndrome with a
prevalance of less than 1/100000 in population. Half of the cases are autosomal
dominant while the rest are sporadic. Primarily affects first and second arcs in
upper airway. It is characterized with anatomical abnormalities like pharyngeal
hypoplasia, craniobasilar kyphosis, mandibulomaxiller hypoplasia, micrognathia,
high and narrow or cleft palate, microstomy, dental abnormalities, congenital
deafness and hypoplastic alar cartilages. Seventeen years old boy with Treacher-
Collins syndrome diagnosis administered to our clinic with cyanosis in sleep. He
had got a bird-like face. In his polysomnographic study AHI 18.5, ODI: 6.3, mean
saturation: 96% and minimum saturation was 94%. While moderate sleep apnea
diagnosis was made surgical intervention was decided after consultations with

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dentistry, plastic and ENT surgeons. This patient is the first case reported from Turkey in international literature.

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