

**Dansk Neurologisk Selskabs**

**årsmøde**

**fredag den 8. og lørdag den 9. april 2005**



**Munkebjerg Hotel**

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## **Programoversigt / tidsplan**

### **Fredag den 8. april 2005**

Sted: Skovsalen

- 09.30 - 09.40 Velkomst
- 09.40 - 10.30 Session I - Professorforelæsning
- 10.30 - 11.10 Session II - Postersession
- 11.10 - 13.00 Session III - Mogens Fog Foredragskonkurrence
- 13.00 - 14.00 Frokost
- 14.00 - 15.30 Session IV - Epilepsisession
- 15.30 - 15.50 Kaffepause
- 15.50 - 17.00 Session IV - fortsat
- 17.00 - 18.30 Session V - Neurobowl
- 19.30 - 02.00 Middag

### **Lørdag den 9. april 2005**

Sted: Skovsalen

- 09.00 - 09.45 Session VI - Uddeling af Rochepris
- 09.45 - 10.00 Kaffepause
- 10.00 - 11.00 Session VII - Muskelsygdomme
- 11.00 - 11.10 Pause
- 11.10 - 12.00 Session VII - Muskelsygdomme fortsat
- 12.00 - 12.15 Pause
- 12.15 - 13.15 Session VIII - Fremtidsudvalgets visioner
- 13.15 - 13.30 Afslutning
- 13.30 - 14.30 Frokost

**Annonce fra Schering A/S - ind her - er modtaget**

**Announce fra UCB - ind her (er modtaget)**

**Fredag den 8. april 2005**

**Velkomst**

09.30 - 09.40 ved Allan Renard Andersen, formand for Dansk Neurologisk Selskab, ledende overlæge, dr.med., Amtssygehuset i Glostrup, Neurologisk afd.

**Session I**

**Professorforelæsning**

09.40 - 10.30 **Farmakologisk behandling af neurogene smerter**

Søren Sindrup, professor, overlæge, dr.med.,  
Odense Universitetshospital, Neurologisk afd. N

**Fredag den 8. april 2005**

**Session II  
Postersession**

Chairman:

Ledende overlæge, dr.med. Michael Binzer  
Neurologisk afd., Sønderborg Sygehus

- 10.30 - 11.10
1. **Physical Activity and Ischemic Stroke: The ExStroke Pilot Trial**  
Thomas Truelsen, Anders Pedersen, Hanne Lerke,  
Marianne Lindahl, Lotte Hansen, Peter Schnohr, Henrik Scharling,  
Gudrun Boysen
  2. **Relationship between nigrostriatal dopaminergic degeneration and urinary symptoms in Parkinson's disease**  
Kristian Winge, Lars Friberg, Lene Werdelin, Kurt Krøyer Nielsen,  
Hans Stimpel
  3. **Motor performance during and following acute alcohol intoxication in healthy subjects**  
Mette Buch Poulsen
  4. **Long term outcome in chronic inflammatory demyelinating polyneuropathy and multifocal motor neuropathy**  
Nørøxe R., Andersen H., Jakobsen J.
  5.  **$\epsilon$ -sarcoglycan Expression in Skeletal Muscle from Patients with Myoclonus-dystonia Syndrome (MDS)**  
Lena E. Hjermand, John Vissing, Jørgen E. Nielsen

## **Poster**

### **Physical Activity and Ischemic Stroke: the ExStroke Pilot Trial**

Thomas Truelsen, Anders Pedersen , Hanne Lerke , Marianne Lindahl , Lotte Hansen, Peter Schnohr, Henrik Scharling, Gudrun Boysen

#### **Background**

Previous epidemiological studies have indicated that higher levels of physical activity are associated with lower risk of ischemic stroke but inconsistencies prevail. Age-neutral questionnaires may be inadequate for assessing physical activities in subjects of high stroke risk. In this study we compared an age-neutral questionnaire with one specifically developed for an elderly population.

#### **Subjects and methods**

Patients with ischemic stroke were enrolled from August 2003 to April 2004. Community control subjects were selected among participants in the Copenhagen City Heart Study (CCHS) and matched to cases according to age, sex, and season. Physical activity during the week before stroke was assessed using the Physical Activity Scale for the Elderly (PASE), and during the last year using the CCHS questionnaire. Multivariate conditional logistic regression analyses were used.

#### **Results**

127 stroke patients and 301 control subjects were included. For each 1 point increase in PASE score the odds ratio (OR) for ischemic stroke was 0.98(0.98-0.99), equivalent to an OR of 0.86 (95%CI:0.81-0.91) for each 10 points' increase. In analyses using the CCHS questionnaire there was no clear relation between physical activity and OR for ischemic stroke.

#### **Conclusions**

Increasing level of physical activity as measured by PASE score was inversely, log-linearly, and significantly associated with ORs for ischemic stroke, while results using the age neutral CCHS questionnaire were insignificant.

## Poster

### Relationship between nigrostriatal dopaminergic degeneration and urinary symptoms in Parkinson's disease

Kristian Winge#, Lars Friberg∇, Lene Werdelin#, Kurt Krøyer Nielsen□, Hans Stimpel□

#Department of Neurology, Bispebjerg Hospital, ∇Department of Clinical Physiology and Nuclear Medicine, Bispebjerg Hospital, and □Department of Urology, Frederiksberg Hospital, Copenhagen, Denmark

#### Objective

To investigate the effects of dopaminergic degeneration on bladder symptoms in Parkinson's Disease.

#### Methods

14 patients with Parkinson's disease younger than 60 years old were evaluated using questionnaires on Lower urinary tract symptoms (LUTS(Dan-PSS)), Parkinson's disease rating scales (UPDRS and Hoehn & Yahr), and single-photon emission computed tomography (SPECT) imaging of the dopamine transporter sites with I-123-FP-CIT.

#### Results

A significant correlation between *Dan-PSS* score and UPDRS (Spearman's  $\rho = 0.75$ ,  $p = 0.001$ ) was seen. The specific uptake of [<sup>123</sup>I]-FP-CIT in the striatum correlated significantly with duration, stage of disease and UPDRS. However, there was no significant correlation between *Dan-PSS* score DAT-receptor uptake measured with SPECT.

Patients with symptoms of bladder dysfunction have a significantly reduced uptake of [<sup>123</sup>I]-FP-CIT in the striatum compared to those without symptoms. In patients with severe LUTS, the putamen-to-caudate ratio correlated significantly with bladder symptoms.

#### Conclusion

The presence of bladder symptoms in PD may be a result of dopaminergic degeneration in the striatum, and the severity of these seems to be dependent of dysfunction in the caudate, as well as dysfunction outside the striatum.

## Poster

### **Motor performance during and following acute alcohol intoxication in healthy subjects**

Poulsen MB, Jakobsen J, Andersen H.

Dept. of Neurology, Aarhus University Hospital, 8000 Aarhus C, DENMARK

Chronic alcohol abuse has adverse effects on skeletal muscles and reduced muscle strength is frequently seen in chronic alcoholics. In this study the acute effects of a moderate alcohol intoxication (1.5‰) on motor performance was evaluated in 19 non-alcoholic healthy subjects (10 women, 9 men). A randomised double-blinded placebo controlled design was applied with subjects receiving alcohol in juice and pure juice at two separate test periods. Isokinetic and isometric muscle strength and endurance were determined before, during, 24 and 48 hours after the ingestion of alcohol in juice and juice (placebo). To detect a reduced activation of the central motor pathways superimposed external electrical stimulations during voluntary contractions were applied. Creatine kinase (CK) was measured to detect any alcohol-induced changes in sarcolemmal integrity. No change was seen in isokinetic as well as isometric muscle performance during or following the alcohol intoxication as compared to the non-alcoholic condition. Also, no central activation failure was observed. No significant differences in CK increments were observed between the alcoholic- and non-alcoholic condition. In conclusion, a single episode of moderate alcohol intoxication does not impair motor performance and no accelerated exercise induced muscle damage is seen.

## **Poster**

### **Long term outcome in chronic inflammatory demyelinating polyneuropathy and multifocal motor neuropathy**

Nørøxe R, Andersen H, Jakobsen J.  
Dept. of Neurology, Aarhus University Hospital, 8000 Aarhus C

#### **Background**

In patients with chronic inflammatory demyelinating polyneuropathy (CIDP) and multifocal motor neuropathy (MMN) the long term outcome and the effect of intravenous immunoglobulin treatment (IVIg) are uncertain.

#### **Objective**

To evaluate the change in muscle strength estimated by manual muscle testing during a long follow up period in relation to given treatment.

#### **Design, patients and setting**

A retrospective follow up study based on patient records of all patients with an established diagnosis of CIDP (n=24) and MMN (n=14) at the Department of Neurology, Aarhus University Hospital from 1992 to 2002.

#### **Results**

During a median follow-up time of 1.116 days (65-3.479) CIDP patients improved in muscle strength from 3.9 to 4.5 (MRC-score) whereas MMN patients had an improvement from 4.0 to 4.1. The IVIg treated CIDP patients improved from 3.8 to 4.5 whereas 5 untreated patients had a change from 4.4 to 4.6. In the MMN group the muscle strength in IVIg treated patients improved from 4.1 to 4.2 whereas the MRC of untreated MMN patients did not change during follow up (3.7).

#### **Conclusion**

IVIg-treated and untreated CIDP patients improved during follow up but the improvement was faster and more pronounced in the IVIg treated group. Patients with MMN did not have a significant improvement during follow up and no significant effect of IVIg treatment was seen.

## Poster

### **$\epsilon$ -sarcoglycan Expression in Skeletal Muscle from Patients with Myoclonus-dystonia Syndrome (MDS)**

Lena E. Hjermind, phd1.+2.; John Vissing, dr.med.3., Jørgen E. Nielsen1.+3.  
Afdeling for Medicinsk Genetik, Panum, Københavns Universitet  
Neurologisk afdeling, Bispebjerg Hospital H:S, København  
Neurologisk afdeling, Rigshospitalet H:S, København

Mutations in the gene encoding  $\epsilon$ -sarcoglycan (SGCE) cause MDS, while mutations in the genes encoding other members of the transmembrane glycoprotein family of sarcoglycans can cause limb-girdle muscular dystrophy. The inheritance of MDS is autosomal dominant in contrast to the sarcoglycan related limb-girdle muscular dystrophies, which are inherited as autosomal recessive traits. SGCE is widely expressed in both muscular and non-muscular cells.  $\epsilon$ -sarcoglycan is the only sarcoglycan present in the brain.

The aim of the present study was to show whether patients with mutation in SGCE and MDS show any clinical or histological signs of skeletal muscle involvement.

Two patients with clinical symptoms of MDS and a 1-bp deletion (974delC) in exon 7 of the SGCE gene were tested for muscle strength and atrophy, and a muscle biopsy from the left vastus muscle was processed for histological and immunohistological studies.

The two patients had universally normal muscle strength and no muscular atrophy. In both, the muscle biopsy was essentially normal, showing no cell necrosis, no infiltration of connective tissue, normal fibre size variability and no central nuclei.

Immunohistochemical stains showed normal expression of  $\alpha$ -,  $\beta$ -,  $\gamma$ -, and  $\delta$ -sarcoglycan in muscle.  $\epsilon$ -sarcoglycan was not detectable in muscle of the patients, but was normally expressed in endothelial cells. Identical findings were found in healthy control subjects.

We investigated a potential dominant negative effect of incorporating mutated units of  $\epsilon$ -sarcoglycan into the sarcoglycan complex in patients with MDS.  $\epsilon$ -sarcoglycan is shown to be highly expressed in skeletal muscle of prenatal rodents, but not in adult rodents. Possibly reflecting a similar low expression of  $\epsilon$ -sarcoglycan in adult, human skeletal muscle, the patients showed no clinical or histological signs of muscle affection. These findings support a different role of the sarcoglycan complex  $\epsilon\beta\gamma\delta$  versus the  $\alpha\beta\gamma\delta$  complex as previously suggested.

**Fredag den 8. april 2005**

**Session III**

**Mogens Fog Foredragskonkurrence**

Chairman:

Professor, overlæge, dr.med. Per Soelberg Sørensen  
Neurologisk Klinik N, Neurocentret, H:S Rigshospitalet

- 11.10 - 13.00
- 1. The personality traits selfdiscipline and vulnerability are associated with regional 5-HT<sub>2A</sub> receptor density in brains of healthy subjects**  
Frokjaer VG, Mortensen EL, Adams KH, Haugbol S, Pinborg LH, Svarer C, Hasselbalch SG, Holm S, Paulson OB, Knudsen G
  - 2. Congenital abnormalities and use of phenytoin, phenobarbital and diazepam - an illustration of a case-time-control study**  
Kjær D., Puho E., Christensen J., Vestergaard M., Czeizel A.E., Sørensen H.T., Olsen J.
  - 3. Do inhibitors of phosphodiesterase 5 (PDE5) affect human cerebral arteries ?**  
Christina Kruise, Tejvir S. Khurana, Sergei D. Rybalkin, Steffen Birk, Ulla Engel, Lars Edvinsson, Jes Olesen
  - 4. Stroke in Europe: Estimating the Current and Future Stroke Burden**  
T. Truelsen, B. Piechowski-Józwiak, R. Bonita, C. Mathers, J. Bogousslavsky, G. Boysen
  - 5. Cerebral 5-HT<sub>2A</sub> receptors are upregulated in patients with Tourette's syndrome**  
S. Haugbøl, L.H. Pinborg, L. Regeur, E.S. Hansen, T.G. Bolwig, F.Å. Nielsen, C.Svarer, L.T. Skovgaard, G.M. Knudsen
  - 6. Effects of FK506 treatment on electrophysiological, morphological, and functional recovery after severe nerve lesions**  
M. Wolthers, M. Moldovan, H. Schmalbruch, C. Krarup

**Session II (fortsat)**  
**Mogens Fog Foredragskonkurrence**

7. **Prevalence of LUTS in PD**  
Kristian Winge, Anne-Marie Skau, Hans Stimpel, Kurt K. Nielsen,  
Lene Werdelin
  
8. **Botulinum toxin A for the treatment of the trigger points of the  
infraspinatus muscle – a randomized, double blind, placebo-  
controlled, parallel study**  
Erisela Qerama, Anders Fuglsang-Frederiksen, Helge Kasch,  
Flemming W. Bach, Troels Staehelin Jensen

13.00 - 14.00 Frokost

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **The personality traits selfdiscipline and vulnerability are associated with regional 5-HT<sub>2A</sub> receptor density in brains of healthy subjects**

Frokjaer VG<sup>1</sup>, Mortensen EL<sup>3</sup>, Adams KH<sup>1</sup>, Haugbol S<sup>1</sup>, Pinborg LH<sup>1</sup>, Svarer C<sup>1</sup>, Hasselbalch SG<sup>1</sup>, Holm S<sup>2</sup>, Paulson OB<sup>4</sup>, Knudsen GM<sup>1</sup>

Neurobiology Research Unit<sup>1</sup> and PET and Cyclotron Unit<sup>2</sup> Copenhagen University Hospital Rigshospitalet, Institute of Public Health, University of Copenhagen<sup>3</sup> and Danish Magnetic Resonance Center, Hvidovre University Hospital<sup>4</sup>, Denmark

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#### **Summary**

The cerebral serotonin 2A (5-HT<sub>2A</sub>) receptor of the serotonergic transmitter system is involved not only in normal psychophysiological functions such as regulation of mood and appetite, but also in psychopathology, such as major depression, anxiety and personality disorders. Whether the 5-HT<sub>2A</sub> receptor density is associated with individual differences in normal personality traits, is however, unknown. In a PET study of sixty-five healthy volunteers, we found that the personality trait vulnerability is positively correlated and self-discipline is negatively correlated with 5-HT<sub>2A</sub> receptor binding in frontal and limbic brain regions. Our data suggest that 5-HT<sub>2A</sub> receptors located in frontal and limbic regions play a specific role in personality traits associated with depression and impulsive aggressive behaviors. Hence, our data offer a link between normal personality profiles and affective disorders and give rise to the question whether biochemical findings in depression, such as 5-HT<sub>2A</sub> receptor density changes, should be viewed as state or trait markers of psychopathology.

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Congenital abnormalities and use of phenytoin, phenobarbital and diazepam - an illustration of a case-time-control study**

Kjær D., Puho E., Christensen J., Vestergaard M., Czeizel AE., Sørensen HT., Olsen J.

#### **Background:**

Case-control studies are widely used in studying possible teratogenic effects of medicine taken during organogenesis but these studies are prone to several sources of bias. The case-time-control approach offers a design strategy less susceptible to some sorts of bias.

#### **Methods:**

We present a study on congenital abnormalities following exposure in 2<sup>nd</sup> and 3<sup>rd</sup> gestational month to phenytoin, phenobarbital, or diazepam, based on data from the Hungarian Case-Control Surveillance of Congenital Abnormalities (1980-1996).

#### **Results:**

Among 22,843 cases and 38,151 controls the odds ratio for all congenital abnormalities in children exposed to at least one of the three drugs was 1.2 (95 % CI 1.0-1.4). In the group of children exposed to diazepam in foetal life the odds ratio for all congenital abnormalities was 1.2 (95 % CI 1.0-1.4), for neural tube defects 2.4 (95 % CI 1.5-3.7), for cleft lip with or without cleft palate 1.8 (95 % CI 1.1-2.8), and for limb deficiencies 2.6 (95 % CI 1.3-4.9).

#### **Conclusion:**

Use of the case-time-control design supports a teratogenic effect of the drugs under study. We believe this design will play an important role in the future, when studying side effects of drugs taken during pregnancy.

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Do inhibitors of phosphodiesterase 5 (PDE5) affect human cerebral arteries ?**

Christina Kruuse MD PhD<sup>1,2</sup>, Tejvir S Khurana MD PhD<sup>1,3,4</sup>, Sergei D Rybalkin PhD<sup>5</sup>, Steffen Birk MD PhD<sup>1,2</sup>, Ulla Engel MD<sup>6</sup>, Lars Edvinsson professor<sup>1,7</sup>, Jes Olesen professor<sup>2</sup>.

Department of Clinical Experimental Research<sup>1</sup>, Danish Headache Centre and Department of Neurology<sup>2</sup> and Department of Clinical Biochemistry<sup>3</sup>, Glostrup University Hospital, University of Copenhagen, Glostrup, Denmark; Department of Physiology & Pennsylvania Muscle Institute<sup>4</sup>, University of Pennsylvania, Philadelphia, USA; Dept. of Pharmacology, University of Washington, Seattle, USA<sup>5</sup>; Department of Pathology<sup>6</sup>, Hillerød Hospital, Hillerød, Denmark; Division of Experimental Vascular Research<sup>7</sup>, Department of Internal Medicine, University Hospital of Lund, Lund, Sweden.

Sildenafil (Viagra ®), a selective inhibitor of cGMP-hydrolyzing phosphodiesterase5 (PDE5), induces migraine without cerebral artery dilatation in vivo. It also enhances neurogenesis, angiogenesis and functional recovery in stroke models. We evaluated the presence of PDE5 in human cerebral arteries and the vasodilator effects of sildenafil and the derivative UK-114,542.

RT-PCR and Western blot established the presence in human middle cerebral artery of PDE5 mRNA and protein. The effect of PDE5 inhibitors on cyclic nucleotide hydrolysis was investigated using homogenates of human and guinea pig cerebral arteries. The vasodilator effects were studied in isolated guinea pig basilar arteries. We measured levels of cAMP and cGMP concomitantly.

Both PDE5 inhibitors caused dose-dependent inhibition of cGMP hydrolysis as well as an endothelium-dependent vasodilatation. Sildenafil induced vasodilatation was only seen above clinically relevant plasma concentrations, whereas UK-114,542 was more potent. The dilatation was augmented by a nitric oxide (NO) donor and attenuated by inhibition of endogenous cGMP production. However, a cGMP-independent dilatation was present at high concentrations.

In conclusion, clinically relevant concentrations of sildenafil dilate cerebral arteries in vitro only when co-administered with NO donors, supporting the in vivo findings. Thus, sildenafil may exert its cerebral effects on neurons rather than on cerebral haemodynamic.

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Stroke in Europe: Estimating the Current and Future Stroke Burden**

T. Truelsen, B.Piechowski-Józwiak, R. Bonita, C. Mathers, J. Bogousslavsky, G. Boysen

#### **Background**

Stroke incidence data are available from few European countries. In the current study we have estimated stroke incidence rates for countries in the European Union, Iceland, Norway, and Switzerland.

#### **Materials and methods**

Estimates for stroke incidence were calculated based on routine mortality statistics, a review of stroke case fatality, cause of death in stroke patients, and expected average survival time after stroke. Information from the United Nations was used to calculate the number of stroke events until 2025. The impact of a 2% increase/decrease per 5 years was also calculated.

#### **Results**

The number of stroke events in the selected countries is likely to increase from a total of 1.1 million per year in 2000 to more than 1.5 million per year in 2025 solely due to the demographic changes. A 2% increase/decrease in rates per 5 years will increase/decrease the number of stroke events in 2025 by 150.000. A cumulative 34 million stroke events will occur during the entire period; a 2% increase/decrease in rates per 5 years, will result in 1.8 million more/less events

#### **Conclusions**

Demographic changes will have an immense impact on the future burden of stroke in selected countries. Prevention of stroke will be essential.

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Cerebral 5-HT<sub>2A</sub> receptors are upregulated in patients with Tourette's syndrome**

S. Haugbøl, MD; L.H. Pinborg, MD; L. Regeur, MD; E.S. Hansen, MD; T.G. Bolwig, MD, DMSc; F.Å. Nielsen, MSc, PhD; C.Svarer, MSc, PhD; L.T. Skovgaard, MSc; G.M. Knudsen, MD, DMSc.

Neurobiology Research Unit, Department of Neurology, University Hospital Rigshospitalet, Copenhagen (Haugbøl, Pinborg, Nielsen, Svarer and Knudsen).  
Department of Neurology, University Hospital Bispebjerg, Copenhagen (Regeur).  
Department of Psychiatry, University Hospital Rigshospitalet, Copenhagen (Hansen and Bolwig). Department of Biostatistics, University of Copenhagen (Skovgaard).

#### **Background**

Experimental and clinical data have suggested that abnormalities in the serotonergic neurotransmissions in frontal-subcortical circuits are involved in Tourette's syndrome. To test the hypothesis that the 5-HT<sub>2A</sub> receptor binding is increased in patients with Tourette's syndrome, PET imaging was performed.

#### **Methods**

Twenty adults with Tourette's syndrome and twenty healthy control subjects were investigated with PET-[<sup>18</sup>F]altanserin using a bolus-infusion schedule to obtain equilibrium of tracer in blood and tissue. Regional values were obtained for [<sup>18</sup>F]altanserin binding potential. PET measurements were compared between patients and controls using a general linear model with age and condition as covariates.

#### **Results**

Comparison between control subjects and Tourette's syndrome patients showed increased [<sup>18</sup>F]altanserin binding in right anterior cingulate ( $p < 0.003$ ) and left putamen ( $p < 0.005$ ). [<sup>18</sup>F]altanserin binding were significantly higher in Tourette's syndrome patients when testing for a overall difference with a randomisation test ( $p < 0.03$ ).

#### **Conclusions**

An increased 5-HT<sub>2A</sub> receptor binding was found in regions closely related to subcortical regions in patients with Tourette's syndrome. Our data suggest that the serotonergic transmitter system is pathophysiologically involved in Tourette's syndrome and that a clinical trial with 5-HT<sub>2A</sub> receptor antagonists may be justified.

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## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Effects of FK506 treatment on electrophysiological, morphological, and functional recovery after severe nerve lesions**

M. Wolthers, M. Moldovan, H. Schmalbruch, C. Krarup.

Department of Clinical Neurophysiology, Rigshospitalet and Institute of Medical Physiology, Panum Institute, University of Copenhagen.

Functional outcome after peripheral nerve lesions is often poor. In order to improve axonal regeneration we have examined the effect of the immunophilin FK506 on the functional, electrophysiological and histological outcome after sciatic nerve lesions in the rat. Recovery was followed over 100-120 days after crush (n=10), section/suture (n=15), section/suture+FK506 (n=20, section/suture+placebo (n=20), and collagen-tube repaired 5 mm gap-lesions treated with FK506 (n=10) or placebo (n=10). The findings in the regenerated nerve was related to the findings on the contralateral nerve for up to 120 days and at termination the tibial nerves were removed for histology. The relative changes in the electrophysiological and functional parameters were used to calculate indices to allow comparison between different nerve lesions. Electrophysiological studies showed earlier reinnervation of plantar muscles after crush and FK506 treated section/suture ( $28 \pm 1$  days, mean $\pm$ SEM) than placebo- ( $32 \pm 1$ ) and untreated section/suture ( $33 \pm 1$ ) ( $p < 0.01$ , ANOVA). After gap lesions the time of reinnervation was earlier for FK506- ( $45 \pm 4$ ) than for placebo-treated ( $55 \pm 1$ ) rats ( $p < 0.001$ , ANOVA). Sciatic Functional Indices (SFI), Conduction Velocity Indices (CVI), and compound muscle action potential Amplitude Indices (AI) were calculated for all groups. FK506-treatment improved recovery of AI of gap lesions ( $p < 0.03$ , MannWhitney) whereas long-term treatment effects were not reflected in other groups. The number of myelinated fibers was increased in regenerated nerves compared to contralateral uninjured nerves; the fiber counts of FK506-treated rats were lower than those of placebo. The findings indicate that FK506 given systemically can improve axonal outgrowth even in severe nerve lesions.

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Prevalence of LUTS in PD**

Kristian Winge\*, Anne-Marie Skau\*, Hans Stimpel<sup>#</sup>, Kurt K. Nielsen<sup>#</sup>, Lene Werdelin\*

\*Copenhagen Movement Disorders Centre, H:S Bispebjerg Hospital, DK-2400 Copenhagen NV,

<sup>#</sup>Department of Urology, H:S Frederiksberg Hospital, DK-2000 Frederiksberg, Denmark

#### **Aim**

To evaluate the prevalence of LUTS in patients with PD, the severity of symptoms and the volume of postmicturitional urine (PMV).

#### **Methods**

Patients with Parkinson's disease were interviewed using 2 sets of questionnaires regarding LUTS, *IPSS* and *Dan-PSS*. *Dan-PSS* has an integrated score addressing bothersomeness of symptoms where as *IPSS* addresses the prevalence and severity of symptoms. Severity of disease was assessed by the modified Hoehn & Yahr rating scale, and volumes of postmicturitional urine were measured (PMV).

#### **Results**

107 patients were evaluated. *DanPSS*-scores correlated significantly with Hoehn & Yahr stage of disease ( $p=0.02$ ). Two arbitrary cut-off were applied, identifying patients with severe LUTS, *Dan-PSS* > 10 and *IPSS* > 10. Patients with significant bothersome LUTS (*Dan-PSS* > 10), were in a higher stage of disease than patients who scored < 10 (2.2 vs 2.0,  $p=0.05$ ). The most frequent symptom was nocturia (86%) followed by frequency (71%) and urgency (68%). The most frequent troublesome LUTS was urgency (61%). Mean PMV was 34 ml. Seven patients (6%) with PD had a PMV larger than 100 ml.

#### **Discussion**

Prevalence of severe LUTS are in line with other studies, but the correlation between *Dan-PSS* and stage of disease, indicates that though we see no increase in frequency and severity of LUTS as PD progresses, patients find symptoms more troublesome. This may be a result of a decreasing ability to integrate sensory input.

## **Bidrag til Mogens Fog Foredragskonkurrence**

### **Botulinum toxin A for the treatment of the trigger points of the infraspinatus muscle – a randomized, double blind, placebo-controlled, parallel study**

Erisela Qerama <sup>1 2</sup> MD, Anders Fuglsang-Frederiksen <sup>2</sup> MD, DMSc, Helge Kasch <sup>1 3</sup>, MD, PhD, Flemming W. Bach <sup>1 3</sup> MD, DMSc, Troels Stachelin Jensen <sup>1 3</sup> MD, DMSc

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Muscle trigger points are common in muscle pain patients. Motor endplate activity has been reported at muscle trigger points. The objective of this double-blinded, randomized, placebo-controlled, parallel, clinical trial was to investigate the efficacy of botulinum toxin A on chronic trigger points in the infraspinatus muscle and to correlate this effect with the presence of motor endplate activity at the trigger points. Thirty consecutive patients with trigger points in the infraspinatus muscles were included. Fifteen patients received 50 units/0.25ml and 15 received 0,25ml of isotonic saline at the trigger point.

The study was designed with a 1 week run in period during which we determined each patients' baseline measures. The trigger point injection was performed on the second visit and outcome measures were registered 3 and 28 days after the injection. The interference pattern of the EMG during maximal voluntary effort and a standardized search for motor endplate activity at the trigger point was performed at the 2<sup>nd</sup> visit and at the 4<sup>th</sup> visit. The presence of motor endplate activity was significantly reduced after injection of Botulinum toxin. However, Botulinum toxin had no better effect than saline on pain (spontaneous or referred), on pressure thresholds and shoulder function at 3 and 28 days after treatment.

**Fredag den 8. april 2005**

**Session IV  
Epilepsisession**

Chairman:  
Overlæge Hans Høgenhaven  
Neurofysiologisk Klinik NF, H:S Rigshospitalet

14.00 - 15.30 **Are "generalised" epilepsies system disorders of the brain ?**

1. The evidence from neuroimaging  
*Fridrich Wörmann*, Oberatz, Institute for Interdisciplinary Epilepsy Research, Bethel, Bielefeld
2. The Clinical and EEG - evidence  
*Peter Wolf*, professor i epileptologi, Københavns Universitet, overlæge, H:S Rigshospitalet, Neurologisk afd. og Epilepsihospitalet i Dianalund

15.30 - 15.50 **Kaffepause**

**Session IV (fortsat)  
Epilepsisession fortsat**

15.50 - 16.25 **EEG og epilepsi - evidensbaseret**  
Hans Høgenhaven, overlæge,  
H:S Rigshospitalet, Klinisk neurofysiologisk Klinik

16.25 - 17.00 **Matematiske epilepsimodeller**  
Troels W. Kjær, afdelingslæge, Ph.D.,  
H:S Rigshospitalet, Klinisk Neurofysiologisk Klinik og Epilepsihospitalet i Dianalund

17.00 - 18.30 **Session V  
Neurobowl**

Chairman:  
Klaus Hansen, overlæge, dr.med.  
Neurologisk afd. N, Neurocentret, H:S Rigshospitalet

**Lørdag den 9. april 2005**

**Session VI  
Uddeling af Rochepris**

09.00 - 09.45 Uddeling af Rochepris til yngre neuroforsker samt foredrag ved prismodtageren

09.45 - 10.00 **Kaffepause**

**Session VII  
Muskelsygdomme**

Chairman:  
Overlæge, dr.med. John Vissing  
Neurologisk Klinik N, Neurocentret, H:S Rigshospitalet

10.00 - 10.40 **Inflammatory myopathies, diagnosis and treatment**  
*Baziel van Engelen*, Professor i neurologi, overlæge ved Neurologisk afdeling, Nijmegen University Hospital, Holland

10.40 - 11.00 **Rediagnosing limb girdle muscular dystrophy in Denmark**  
Klinisk assistent *Marie-Louise Sveen*,  
Neurologisk Klinik N, Neurocentret, H:S Rigshospitalet

11.00 - 11.10 **Pause**

**Session VII (fortsat)**

11.10 - 11.40 **Mitochondrial disease in neurology**  
Overlæge, dr.med. *John Vissing*,  
Neurologisk Klinik N, Neurocentret, H:S Rigshospitalet

11.40 - 12.00 **Does physical training improve mitochondrial function and fitness in patients with mitochondrial myopathy ?**  
Klinisk assistent *Tina Dysgaard Jeppesen*,  
Neurologisk Klinik N, Neurocentret, H:S Rigshospitalet

12.00 - 12.15 **Pause**

**Lørdag den 9. april 2005**

**Session VIII  
Fremtidsudvalgets visioner**

Chairman:

Ledende overlæge, dr.med. Allan Renard Andersen  
Neurologisk afd. N, Amtssygehuset i Glostrup

12.15 - 13.15 Udvalget vedrørende neurologiens fremtid ved formand  
Lene Werdelin, overlæge, dr.med.  
Neurologisk afd. N, H:S Bispebjerg Hospital

Der henvises i øvrigt til den udsendte rapport  
"Neurologiens fremtid".

13.15 - 13.30 **Afslutning**

13.30 - 14.30 **Frokost**

# HOTELPLAN

## UNDERETAGE/LOWER FLOOR

## STUEETAGE/GROUND FLOOR

