

**ECNP Targeted Expert Meetings 2008: Neurology
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On behalf of

Serge H. Ahmed, France; Carlo Colosimo, Italy; Jean-Christophe Corvol, France; Andrew H. Evans, Australia; Yasmin L. Hurd, USA; T. Celeste Napier, USA; Francesca Romana Pezzella, Italy; Friederike Sixel-Döring, Germany; Valerie Voon, Canada; Tatiana Witjas, France

This meeting focussed on certain psychiatric aspects of Parkinson's disease (PD) which received little attention up till 5 years ago. Patients with PD are usually regarded as being at low risk for addiction. However, there is a subgroup of PD patients which take increasing doses of dopaminergic medication far beyond those required for adequate control of their motor symptoms. The rapid increase of dopaminergic medication is associated with the development of disabling dyskinesias and stereotypic, repetitive behaviours ("punding"). This syndrome of harmful, compulsive use of dopaminergic medication in PD is termed "dopamine dysregulation syndrome" and has been linked to young age at onset of PD, novelty seeking traits, previous use of alcohol and illicit drugs. In addition, dopamine replacement therapy in PD can lead to various disorders of impulse control such as pathological gambling, hypersexuality, pathological shopping and compulsive eating. Impulse control disorders usually have been observed in PD patients taking dopamine agonists but are also linked to young age at onset of PD and novelty seeking traits.

The TEM meeting started with an excellent overview on the role of dopamine in addiction presented by Yasmin Hurd which was followed by a lively discussion, initiated by Serge Ahmed and Celeste Napier, and continued by all participants, of different theories of addiction and their relevance to the dopamine dysregulation syndrome in PD. Andrew Evans presented an overview on the phenomenology and management of the dopamine dysregulation syndrome and punding. The data presented suggest that patients taking dopamine agonists may be at higher risk for the development of punding than patients taking levodopa monotherapy and the management of this problem once present is extremely difficult. Carlo Colosimo and Francesca Romana Pezzella presented data from their own clinic suggesting that the prevalence of dopamine dysregulation syndrome and impulse control disorders in PD may be lower in Italy than in the UK and in North America. The influence of culture and legislation on the expression of these behaviours were extensively discussed. Valerie Voon gave an excellent overview of the different impulse control disorders in PD and presented new data on the prevalence of these disorders from a large North American survey. In addition, Valerie Voon presented functional imaging data providing new insights into mechanisms underlying these disorders. In her contribution, Friederike Sixel-Döring showed that impulse control disorders in response to dopamine agonist treatment are not exclusive to PD, but are also seen in patients with restless legs syndrome taking dopamine agonists. Tatiana Witjas reported on the French experience in treating patients with dopamine dysregulation syndrome and impulse control disorders with deep brain stimulation. Many patients improve under subthalamic stimulation since this treatment allows for a substantial dose reduction of dopaminergic medication. The following discussion demonstrated the complexity of the problem. Though deep brain stimulation is a treatment option for PD patients with impulse control disorders, these patients are at high risk of developing depression or apathy after surgery. In addition, there is an increased risk of suicide after subthalamic surgery, especially in patients with impulse control disorders.

In summary, the TEM symposium demonstrated that the dopamine dysregulation syndrome and impulse control disorders represent a major challenge for neurologists caring for PD

patients and that there is a need for a close clinical and scientific cooperation between neurology, psychiatry and basic neuroscience research to improve diagnosis and management of these complications.