### Satellite Symposium at the 7th Congress of the EAN

7th Congress of the European Academy of Neurology – Virtual 2021, Towards Precision Neurology Saturday 19 – Tuesday 22 June 2021

# The evolution of infusion therapy for Parkinson's Disease

Translating clinical progress into personalised solutions

Britannia-sponsored virtual symposium

## Monday 21 June 2021, 13:45–14:45, Vienna Room

### Agenda

Welcome & introductions: Device-aided therapies for PD – current landscape and goals of treatment K Ray Chaudhuri (UK) – Symposium Chair

Developments in levodopa infusion therapies – less is more Dag Nyholm (Sweden)

The patient experience – generating data to improve outcomes Tobias Warnecke (Germany)

**Developments in apomorphine infusion therapy – recent data and new insights Werner Poewe** (Austria)

Followed by an audience Q&A with the faculty - please join us and have your say!

Join our symposium to learn about the latest developments in device-aided therapies for Parkinson's disease and how they can benefit patients



Company products will be discussed during the symposium. Prescribing information can be found on pages 6 and 7.

Please note that registration conditions for LECIGON<sup>®</sup> differ internationally, so it may not be registered in your country of origin. Please consult your local prescribing information before initiating treatment.

# Welcome & introduction

### Device-aided therapies for PD – current landscape and goals of treatment

K Ray Chaudhuri, UK - Symposium Chair

Professor Chaudhuri will introduce the esteemed international faculty who will each bring you up to date on key developments in research or clinical practice with device-aided therapies for Parkinson's disease and demonstrate how this progress can help provide personalised care for patients as well as practical benefits for healthcare teams.

To set the scene for the presentations, Professor Chaudhuri will review:

- The rationale for device-aided therapies what's the real benefit?
- Transitioning from oral medications when is the right time?
- The patient experience what do patients want from their treatment?
- Recent advances in device-aided therapies the need for evidence-based and patient-centred treatment options.



# Professor K Ray Chaudhuri

Director, Parkinson Foundation Centre of Excellence, Kings College, London, UK

### Presentation

### Developments in levodopa infusion therapies – less is more

Dag Nyholm, Sweden

Professor Nyholm will provide an overview of the latest device-aided therapy option for patients with Parkinson's disease – a novel trigel for intestinal infusion comprising levodopa, carbidopa and entacapone – which has already been used successfully to treat patients with PD in Sweden and several other European countries.

- The clinical evidence efficacy, safety and practical use.<sup>1,2</sup>
- What are the advantages compared with standard levodopa-carbidopa infusion – for healthcare teams and for patients?
- Which patients would be suitable and who would not be suitable?
- What is the procedure for transitioning patients from oral medications or other device-aided therapies?
- Review of real patient case studies.



## Associate Professor Dag Nyholm

Associate Professor of Neurology, Department of Neuroscience, Uppsala University, Sweden

#### 1. Senek M, et al. Mov Disord. 2017;32(2):283–6 2. Senek M, et al. Sci Rep. 2020;10(2):18057

### Presentation

# The patient experience – generating data to improve outcomes

Tobias Warnecke, Germany

For any therapeutic intervention, the generation of registry is an invaluable source of real-world information to support controlled clinical trial data. Professor Warnecke will outline plans for the ELEGANCE study: a prospective, observational study of levodopa-carbidopa-entacapone infusion.

- ELEGANCE: Global Long-Term Registry on Efficacy and Safety of LECIGON in Patients with Advanced Parkinson's Disease in Routine Care.
- A multinational study across 18 countries.
- Patient outcomes will be observed over 24 months:
  - Analysis of long-term efficacy and safety in a routine care setting
  - Analysis of patient quality of life and healthcare resource utilisation.



# Professor Tobias Warnecke

Department of Neurology, University Hospital Münster, Münster, Germany

### Presentation

### Developments in apomorphine infusion therapy – recent data and new insights

Werner Poewe, Austria

Subcutaneous apomorphine infusion is currently the least invasive device-aided therapy option. As a key investigator of the TOLEDO randomised, controlled trial of apomorphine infusion, Professor Poewe will review the recently-published long-term safety and efficacy data from the open-label phase of this trial as well as ongoing studies that support the long-standing clinical experience with this product.

- Results from the TOLEDO trial<sup>1,2</sup> what do they tell us about long-term use of apomorphine infusion?
- The EARLY-pump study (NCT02864004) evaluating the timing of apomorphine infusion initiation.
- Meeting the challenges of the COVID-19 pandemic remote initiation of apomorphine infusion.



# Professor Werner Poewe

Department of Neurology, Medical University Innsbruck, Innsbruck, Austria

1. Katzenschlager R, et al. Lancet Neurol. 2018;17(9):749–59 2. Katzenschlager R, et al. Parkinsonism Relat Disord. 2021;83:79–85 Consult Summary of Product Characteristics before prescribing.

**Indications** Treatment of motor fluctuations ("on-off" phenomena) in patients with Parkinson's disease which are not sufficiently controlled by oral anti-Parkinson medication.

Dosage and Administration Apomorphine hydrochloride is administered subcutaneously either as an intermittent bolus injection or by continuous subcutaneous infusion. Apomorphine should be initiated in the controlled environment of a specialist clinic. The patient should be supervised by a physician experienced in the treatment of Parkinson's disease (e.g. neurologist). The patient's treatment with levodopa, with or without dopamine agonists, should be optimised before starting APO-go® treatment. The appropriate dose for each patient is established by incremental dosing schedules. For bolus injection it is suggested to start with 1 mg of apomorphine (0.1 ml) during a hypokinetic or 'off' period. If no response or an inadequate response is obtained after 30 minutes, a second dose of 2 mg is injected and the patient is observed for a further 30 minutes. The dosage may be increased by incremental injections with at least a forty minute interval between succeeding injections, until a satisfactory motor response is obtained. Patients who have shown a good 'on' period response during the initiation stage of apomorphine therapy, but whose overall control remains unsatisfactory using intermittent injections, or who require many and frequent injections (more than 10 per day), may be commenced on or transferred to continuous subcutaneous infusion by minipump and/or syringe driver. Continuous infusion is started at a rate of 1 mg apomorphine HCl (0.1 ml) per hour then increased according to the individual response. Increases in the infusion rate should not exceed 0.5 mg per hour at intervals of not less than 4 hours. Hourly infusion rates may range between 1 mg and 4 mg (0.1 ml and 0.4 ml), equivalent to 0.015 - 0.06 mg/kg/hour. Infusions should run for waking hours only. Patients treated with apomorphine will usually need to start domperidone at least two days prior to initiation of therapy. The domperidone dose should be titrated to the lowest effective dose and discontinued as soon as possible. Before the decision to initiate domperidone and apomorphine treatment, risk factors for QT interval prolongation in the individual patient should be carefully assessed to ensure that the benefit outweighs the risk. The optimal dosage of apomorphine HCl has to be determined on an individual patient basis; individual bolus injections should not exceed 10mg and the total daily dose should not exceed 100 mg. Do not use if the solution has turned green. The solution should be inspected visually prior to use. Only clear, colourless and particle free solution should be used. Apomorphine must not be used via the intravenous route.

**Contraindications** Children and adolescents (up to 18 years of age). Known hypersensitivity to apomorphine or any excipients of the medicinal product. Respiratory depression, dementia, psychotic disease or hepatic insufficiency. Intermittent apomorphine HCI treatment is not suitable for patients who have an "on" response to levodopa which is marred by severe dyskinesia or dystonia.

**Pregnancy and lactation** Apomorphine should not be used in pregnancy unless clearly necessary. Breastfeeding: It is not known whether apomorphine is excreted in breast milk. A decision on whether to continue/discontinue breastfeeding or to continue/discontinue therapy with APO-go<sup>®</sup> should be made taking into account the benefit of breastfeeding to the child and the benefit of APO-go<sup>®</sup> to the woman.

Ability to drive and operate machinery Apomorphine has minor or moderate influence on the ability to drive and use machines. Patients being treated with apomorphine and presenting with somnolence and/ or sudden sleep episodes must be informed to refrain from driving or engaging in activities (e.g. operating machines) where impaired alertness may put them or others at risk of serious injury or death until such recurrent episodes and somnolence have resolved.

**Interactions** Patients should be monitored during initiation with apomorphine therapy particularly when used with other medications that have a narrow therapeutic window. There is potential for interaction with neuroleptic and antihypertensive agents and cardiac active medicinal products. It is recommended to avoid the administration of apomorphine with other drugs known to prolong the QT interval.

**Precautions** Use with caution in patients with renal, pulmonary or cardiovascular disease, or who are prone to nausea or vomiting. Apomorphine may produce hypotension, exercise care in patients with cardiac disease or who are taking vasoactive drugs. Neuropsychiatric

disturbances may be exacerbated by apomorphine. Apomorphine has been associated with somnolence and episodes of sudden sleep onset (see advice on driving above). Haematology tests should be undertaken at regular intervals as haemolytic anaemia and thrombocytopenia have been reported. Monitor patients for the development of impulse control disorders. Dose reduction/tapered discontinuation should be considered if such symptoms develop. Dopamine dysregulation Syndrome (DDS) is an addictive disorder resulting in excessive use of the product seen in some patients treated with apomorphine; patients and caregivers should be warned of the potential risk of developing DDS. Apomorphine may have the potential for QT prolongation, exercised caution when treating patients at risk for torsades de pointes arrhythmia. Risk factors for use with domperidone include serious underlying heart conditions such as congestive cardiac failure, severe hepatic impairment or significant electrolyte disturbance. An ECG should be performed prior to treatment with domperidone, during the treatment initiation phase and as clinically indicated thereafter to monitor prolongation of QT interval. Patients should report possible cardiac symptoms; palpitations, syncope, or near-syncope and clinical changes that could lead to hypokalaemia, e.g. gastroenteritis or initiation of diuretic therapy. At each medical visit, risk factors should be revisited. Apomorphine has been associated with local subcutaneous effects that can be sometimes reduced by rotation of injection sites in order to avoid nodularity and induration. Contains sodium metabisulphite which may rarely cause severe allergic reactions and bronchospasm.

Side Effects: Very common: Hallucinations and injection site reactions. Common: Neuropsychiatric disturbances, somnolence, transient sedation, dizziness, yawning, nausea and vomiting. Rarely, injection site necrosis and ulceration have been reported. Severe drug-induced dyskinesias during "on" periods may require discontinuation. Postural hypotension is usually transient and infrequent. Positive Coombs' tests, haemolytic anaemia and thrombocytopenia have been reported. Eosinophilia occurs rarely. Dopamine agonists, including apomorphine, may cause impulse control disorders such as pathological gambling, increased libido, hypersexuality, compulsive spending or buying, binge eating or compulsive eating. Rarely, allergic reactions (including anaphylaxis and bronchospasm) due to sodium metabisulphite. Symptoms of overdose like excessive emesis, respiratory depression, hypotension and bradycardia may be treated empirically.

Prescribers should consult the Summary of Product Characteristics in relation to other adverse reactions.

**Presentation and Basic NHS Cost** APO-go<sup>®</sup> pens (disposable multiple dosage injector system) contain apomorphine hydrochloride 10mg/ml, as follows: 30mg in 3ml – basic NHS cost £123.91 per carton of 5 pens. APO-go<sup>®</sup> Pre-filled syringes contain apomorphine hydrochloride 5mg/ml, as follows: 50mg in 10ml – basic NHS cost £73.11 per carton of 5 syringes. APO-go<sup>®</sup> ampoules contain apomorphine hydrochloride 10mg/ml as follows: 50mg in 5ml – basic NHS cost £73.11 per carton of 5 ampoules.

#### **Marketing Authorisation Numbers:**

APO-go® Ampoules: PL 04483/0072 APO-go® Pen: PL 04483/0073 APO-go® Pre Filled Syringes: PL 04483/0074

#### Legal Category POM

SmPC Revision Date January 2020

API Revision date May 2021

Marketing Authorisation Holder in the UK Britannia Pharmaceuticals, 200 Longwater Avenue, Green Park, Reading, Berkshire, RG2 6GP

**Full prescribing information** and further information is available from Britannia Pharmaceuticals at medinfo@britannia-pharm.com or 0808 196 8585.

Adverse events should be reported. Reporting forms and information can be found at https://yellowcard.mhra.gov.uk/ or search for MHRA Yellow Card in the Google Play or Apple App Store. Adverse events should also be reported to Britannia Pharmaceuticals Ltd at dso@britannia-pharm.com or 0808 196 8585.

Version Number: APG.PI.V29

# FACHKURZINFORMATION: Lecigimon 20 mg/ml + 5 mg/ml + 20 mg/ml Gel zur intestinalen Anwendung.

**Qualitative und quantitative Zusammensetzung:** 1 ml enthält 20 mg Levodopa, 5 mg Carbidopa-Monohydrat (entsprechend 4,6 mg wasserfreiem Carbidopa) und 20 mg Entacapon. 47 ml (1 Patrone) enthält 940 mg Levodopa, 235 mg Carbidopa-Monohydrat und 940 mg Entacapon. **Anwendungsgebiete:** Behandlung der fortgeschrittenen Parkinson-Krankheit mit schweren motorischen Fluktuationen und Hyperkinesie oder Dyskinesie, wenn verfügbare orale Kombinationen von Parkinson-Arzneimitteln nicht zu zufriedenstellenden Behandlungsergebnissen geführt haben. **Gegenanzeigen:** •Überempfindlichkeit gegen den Wirkstoff oder einen der in Abschnitt 6.1 der Fachinformation genannten sonstigen Bestandteile. •Engwinkelglaukom. •schwerwiegende Herzinsuffizienz. •schwerwiegende Herzrhythmusstörungen. •akuter Schlaganfall. •schwerwiegende Beeinträchtigung der Leberfunktion. •nicht-selektive MAO-Hemmer und selektive MAO-Hemmer des Typs A dürfen nicht gleichzeitig mit Lecigimon angewendet werden. Diese Hemmer müssen mindestens zwei Wochen vor Beginn der Behandlung mit Lecigimon abgesetzt worden sein. Lecigimon kann gleichzeitig mit der vom Hersteller empfohlenen Dosis eines MAO-Hemmers mit Selektivität für MAO Typ B (z. B. Selegilinhydrochlorid) angewendet werden (siehe Abschnitt 4.5 der Fachinformation). • Erkrankungen, bei denen Sympathomimetika (Adrenergika) kontraindiziert sind, z. B. Phäochromozytom, Schilddrüsenüberfunktion (Hyperthyreose) und Cushing-Syndrom. • malignes neuroleptisches Syndrom (NMS) und/oder nichttraumatische Rhabdomyolyse in der Anamnese. •verdächtige, nicht diagnostizierte Hautveränderungen oder Melanom in der Anamnese (Levodopa könnte ein malignes Melanom aktivieren). Pharmakotherapeutische Gruppe: Antiparkinsonmittel, Dopa und Dopa-Derivate. ATC-Code: N04BA03. Liste der sonstigen Bestandteile: Carmellose-Natrium, Salzsäure (zur pH-Wert-Einstellung), Natriumhydroxid (zur pH-Wert-Einstellung), Wasser. Inhaber der Zulassung: LobSor Pharmaceuticals AB, SE-753 19 Uppsala. Mitvertrieb: STADA Arzneimittel GmbH, 1190 Wien. Rezeptpflicht/Apothekenpflicht: Rezept- und apothekenpflichtig, wiederholte Abgabe verboten. Weitere Angaben zu Nebenwirkungen, Wechselwirkungen mit anderen Arzneimitteln oder sonstigen Wechselwirkungen, Schwangerschaft und Stillzeit, Gewöhnungseffekten und zu den Warnhinweisen und Vorsichtsmaßnahmen für die Anwendung sind der veröffentlichten Fachinformation zu entnehmen.

Stand der Information: September 2020.

