

**NORTH DERBYSHIRE HEALTH PRESCRIBING AND NEW TECHNOLOGIES  
STRATEGY GROUP**

**SHARED CARE GUIDELINE  
APOMORPHINE IN THE TREATMENT OF PARKINSON'S DISEASE**

**REFERRAL CRITERIA**

- Shared Care is only appropriate if it provides the optimum solution for the patient.
- Prescribing responsibility will only be transferred when it is agreed by the consultant and the patient's GP that the patient's condition is reasonably predictable and the treatment regime has been specified.
- Patients will only be referred to the GP once the GP has agreed in each individual case.
- The patient will be given a supply of apomorphine sufficient for 4 weeks maintenance therapy.

1. **Clinical details**

Apomorphine is a directly acting dopaminergic agonist, licensed for use in patients with Parkinson's Disease who have frequent and/or severe akinesia ("off periods") not controlled by levodopa or other dopamine agonists. Research has shown that apomorphine reduces the daily "off" period time by up to 50% in patients with late-stage Parkinson's disease associated with refractory on-off oscillations.

Treatment is by intermittent sub-cutaneous injection at the onset of an "off" period; or by continuous sub-cutaneous infusion usually over 12 hours. Following a single dose, apomorphine has an onset of action of 5-15 minutes and lasts for 45-90 minutes.

Candidates for apomorphine therapy are those capable of recognising and anticipating "off" episodes. They must also be capable and motivated in order to use the treatment properly.

Although apomorphine is not commonly used, it is a relatively safe drug.

2. **Product information**

Apomorphine is available as:

- i. ampoules containing 20mg/2ml or 50mg/5ml (APO-go)
- ii. disposable multiple dose pen injector system containing 30mg/3ml (Britaject)

Pre-treatment and associated co-treatment with domperidone is essential (see below).

(a) **Dose and means of administration**

These will be determined and adjusted by the specialist team. The total daily dose should not exceed 100mg (usually less).

(b) **Use by sub-cutaneous infusion**

This is commonly used in North Derbyshire and is delivered via a sub-cutaneous butterfly needle attached to a syringe driver. The patient and their carers will be

instructed in the use of this system and patient held information will be provided for their own use and to support Primary Care personnel who may be involved in problems with the infusion system (UCL Booklet).

(c) **Storage**

Ampoules

The manufacturers recommend that since APO-go ampoules do not contain a preservative, once an ampoule is opened any unused portion should be discarded after 24 hours. Filled syringes can be stored in the fridge for 24 hours. The ampoule should be used in the most economic way possible.

Pen system

*Britaject* pens should be stored in a cool dry place (below 25 C) but not in the refrigerator. Each pen should be discarded 48 hours after first use.

Do not use the solution if it has turned green.

(d) **Availability**

Apomorphine is prescribable on FP 10 but is not available from local wholesalers, only direct from the manufacturers:

Britannia Pharmaceuticals Ltd  
Forum House  
41-51 Brighton Road  
Redhill  
Surrey  
RH1 6YS  
Tel: (01737) 773741; Fax: (01737) 773973;  
e-mail: [Britannia.Orders@forumgroup.co.uk](mailto:Britannia.Orders@forumgroup.co.uk).

The community pharmacist will therefore require a few days notice to obtain apomorphine. If ordered before noon, delivery is next working day.

(c) **Cost**

Basic NHS cost is £37.96 for 5 x 20mg/2ml ampoules, £76.16 for 5 x 50mg/5ml ampoules, or £123.91 for 5 x 30mg/3ml pens.

3. **Ancillary products/apparatus which may need to be prescribed by GP**

(a) **Britaject Pens**

These are prescribable on FP 10. The patient will usually have been given one by the hospital. Please prescribe in multiples of 5. This is a disposable multiple dose pen injector system incorporating a clear glass cartridge. Britannia supply Novofine

Needles for use with the Pen free of charge when the Pens are ordered. These do not need ordering on the FP 10 and will be supplied with the Pens when dispensed.

(b) **APO-go ampoules**

These are for use with a syringe driver for continuous sub-cutaneous infusion. It is usually diluted with sodium chloride 0.9% injection which will need to be prescribed on the FP 10. Syringe drivers are supplied by Britannia. Butterflies, infusion lines, syringes and other associated equipment will be supplied by the specialist team.

**Domperidone tablets to prevent vomiting**

Apomorphine is usually highly emetogenic, so all patients are treated with domperidone 20-30 mg tds starting at least 3 days prior to initiation of therapy. It is sometimes possible to withdraw this after a couple of months. The domperidone may also prevent/reduce postural hypotension.

Cost of domperidone: £14 - £21 for 28 days

4. **Possible side effects of treatment**

Apomorphine may provoke;

- nausea and vomiting
- postural hypotension – usually only transient on initiation of treatment
- neuro-psychiatric disturbances, e.g. abnormal involuntary movements, hallucinations, delusions and confusional states.
- inflammation and formation of nodules at injection sites.
- dyskinesias
- eosinophilia in up to 10% of patients
- may rarely cause haemolytic anaemia

5. **Aspects of care for which consultant is responsible**

For initiating treatment and supervising the training by the nursing staff of the patient or their carer as to how to administer the injection and dosage and the timing of these injections to gain the maximum benefit to the patient. This normally requires a period of inpatient care lasting about a week.

The consultant should ensure that a full blood count and Coombs test is performed every 6-12 months and act on those results appropriately.

6. **Conditions of assuming responsibility by GP/aspects of care for which GP is responsible**

After being discharged as an inpatient, the patient is subsequently closely supervised through the outpatient clinic and the responsibility only transferred to the GP when the GP, patient and his/her family are thoroughly conversant with the use of apomorphine.

The GP should inform the specialist team of any significant development or deterioration in the following areas: motor performance, hallucinations, confusional states, psychosis, depression or an inability to administer apomorphine.

The GP may adjust the dose of domperidone, if necessary, but should not adjust the dose of apomorphine.

7. **Individual considerations of each case between consultant and GP**

Hospital supervision should remain close and further periods of re-admission may be required to make adjustments to timing, dosage or the use of apomorphine in individual cases.

8. **Back-up care available to GP from hospital**

As above.

Contact number of consultant for GP:

Dr. Medcalf (01246) 552430  
Walton Day Hospital (01246) 552890

Advice on shared care, funding and pharmaceutical matters may be obtained through your Primary Care Organisation.

9. **Patient information leaflets (PILs)**

Various PILs are available from the company (Britannia Pharmaceuticals) including "intermittent injections" and "infusions" as well as a "users guide".

The guideline should be read in conjunction with the relevant SPC.

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