- Fasting blood glucose should be measured at baseline, at 4–6 months, and then yearly. Patients taking olanzapine should have fasting blood glucose tested at baseline, after one months' treatment, then every 4–6 months.

- **DIRECTIONS FOR ADMINISTRATION** Correct injection technique (including use of z-track technique) and rotation of injection sites are essential.

- **MEDICINAL FORMS** There can be variation in the licensing of different medicines containing the same drug.

Powder and solvent for suspension for injection

- **Zypadhera** (Eli Lilly and Company Ltd)

Olanzapine (as Olanzapine embonate monohydrate) 210 mg Zypadhera 210mg powder and solvent for suspension for injection vials | 1 vial PoM £142.76 DT = £142.76

Olanzapine (as Olanzapine embonate monohydrate) 300 mg Zypadhera 300mg powder and solvent for suspension for injection vials | 1 vial PoM £222.64 DT = £222.64

Olanzapine (as Olanzapine embonate monohydrate) 405 mg Zypadhera 405mg powder and solvent for suspension for injection vials | 1 vial PoM £285.52 DT = £285.52

4 Movement disorders

Cerebral palsy and spasticity

05-Apr-2019

Overview

Cerebral palsy is a group of permanent, non-progressive abnormalities of the developing fetal or neonatal brain that lead to movement and posture disorders, causing activity limitation and functional impact. There can be accompanying clinical and developmental comorbidities. These include disturbances of sensation, perception, cognition, communication and behaviour, epilepsy, and secondary musculoskeletal problems (such as muscle contracture and abnormal torsion). Cerebral palsy is not curable and the comorbidities can impact on many areas of participation and quality of life, particularly eating, drinking, comfort, and sleep.

There are an increasing number of adults now living with cerebral palsy. These patients have a wide range of abilities — from full independence in everyday life to requiring 24 hour care and attention. It is therefore important that patients and their family and carers are provided with information about the network of general and specialised adult services available, to ensure their changing needs are met. The management of adults with cerebral palsy is a continuation from childhood under the care of specialists. For guidance on the management of patients with cerebral palsy, see *Cerebral Palsy and Spasticity* in BNF for Children.

Useful Resources

Cerebral palsy in under 25s: assessment and management. National Institute for Health and Care Excellence. Clinical guideline 62. January 2017.
www.nice.org.uk/guidance/ng62

Spasticity in under 19s: management. National Institute for Health and Care Excellence. Clinical guideline 145. July 2012 (updated November 2016).
www.nice.org.uk/guidance/cg145

Cerebral Palsy in adults. National Institute for Health and Care Excellence. Clinical guideline 119. January 2019.
www.nice.org.uk/guidance/ng119

Motor neurone disease

17-May-2017

Description of condition

Motor neurone disease is a neurodegenerative condition affecting the brain and spinal cord. Degeneration of motor neurones leads to progressive muscle weakness; resulting symptoms include muscle cramps, wasting and stiffness, loss of dexterity, reduced respiratory function and cognitive dysfunction. The most common form is amyotrophic lateral sclerosis.

EvGr Patients suspected of having developed motor neurone disease should be referred to a neurologist without delay. A

Aims of treatment

As there is no cure, treatment focuses on maintaining functional ability and managing symptoms.

Non-drug treatment

Non-drug treatment includes nutrition, psychosocial support, physiotherapy, exercise programmes and use of special equipment or mobility aids.

Management of symptoms

Muscular symptoms

EvGr Quinine p. 655 [unlicensed indication] is recommended as first line treatment for muscle cramps. If quinine is ineffective, not tolerated or contra-indicated, baclofen p. 1190 [unlicensed indication] should be considered as second line treatment. Subsequent treatment options include tizanidine p. 1192 [unlicensed indication], dantrolene sodium p. 1417 [unlicensed indication] or gabapentin p. 331 [unlicensed indication].

Symptoms of muscle stiffness, spasticity or increased tone can be managed with baclofen, tizanidine, dantrolene sodium or gabapentin [unlicensed indication]. Treatment of severe spasticity may require specialist referral. A

Saliva problems

EvGr A trial of an antimuscarinic drug [unlicensed indication] can be considered for excessive drooling of saliva. Glycopyrronium bromide p. 1405 is recommended in patients who have cognitive impairment as it has fewer central nervous system side-effects. If initial treatment is ineffective, not tolerated or contra-indicated, referral for specialist administration of botulinum toxin type A p. 425 [unlicensed indication] may be required.

Humidification, nebulisers and carbocisteine p. 306 can be used to treat patients with thick, tenacious saliva. A

Respiratory symptoms

EvGr Reversible causes of worsening respiratory impairment (such as respiratory tract infections or secretion problems) should be treated before considering other options.

Patients experiencing breathlessness can be treated with opioids [unlicensed indication], or benzodiazepines [unlicensed indication] if the patient's symptoms are exacerbated by anxiety. Non-invasive ventilation should be considered in patients with respiratory impairment. A

Amyotrophic lateral sclerosis

Riluzole p. 1186 is licensed for use in patients with amyotrophic lateral sclerosis to extend life or to extend the time to mechanical ventilation—see *National funding/access decisions* under riluzole.

Useful Resources

Motor neurone disease: assessment and management. National Institute for Health and Care Excellence. Clinical guideline NG42. February 2016.
www.nice.org.uk/guidance/ng42