5.2 Neuropathic pain

Neuropathic pain

Overview and management

Neuropathic pain, which occurs as a result of damage to neural tissue, includes *compression neuropathies*, *peripheral neuropathies* (e.g. due to Diabetic complications p. 486, HIV infection p. 445, chemotherapy), *trauma*, *idiopathic neuropathy*, *central pain* (e.g. pain following spinal cord injury and syringomyelia), *postherpetic neuralgia*, and *phantom limb pain*. The pain may occur in an area of sensory deficit and may be described as burning, shooting or scalding; it may be accompanied by pain that is evoked by a nonnoxious stimulus (allodynia).

Children with chronic neuropathic pain require multidisciplinary management, which may include physiotherapy and psychological support. Neuropathic pain is generally managed with a **tricyclic antidepressant** such as amitriptyline hydrochloride p. 255 or **antiepileptic drugs** such as carbamazepine p. 209. Children with localised pain may benefit from **topical local anaesthetic** preparations, particularly while awaiting specialist review. Neuropathic pain may respond only partially to **opioid analgesics**. A corticosteroid may help to relieve pressure in compression neuropathy and thereby reduce pain.

Chronic facial pain

Chronic oral and facial pain including *persistent idiopathic facial pain* (also termed 'atypical facial pain') and *temporomandibular dysfunction* (previously termed temporomandibular joint pain dysfunction syndrome) may call for prolonged use of analgesics or for other drugs. **Tricyclic antidepressants** may be useful for facial pain [unlicensed indication], but are not on the Dental Practitioners' List. Disorders of this type require specialist referral and psychological support to accompany drug treatment. Children on long-term therapy need to be monitored both for progress and for side-effects.

6 Sleep disorders

6.1 Insomnia

Hypnotics and anxiolytics

Overview

Most anxiolytics ('sedatives') will induce sleep when given at night and most hypnotics will sedate when given during the day. Hypnotics and anxiolytics should be reserved for short courses to alleviate acute conditions after causal factors have been established.

The role of drug therapy in the management of anxiety disorders in children and adolescents is uncertain; drug therapy should be initiated only by specialists after psychosocial interventions have failed. Benzodiazepines and tricyclic antidepressants have been used but adverse effects may be problematic.

Hypnotics

The prescribing of hypnotics to children, except for occasional use such as for sedation for procedures is not justified. There is a risk of habituation with prolonged use. Problems settling children at night should be managed with behavioural therapy.

Dental procedures

Some anxious children may benefit from the use of a hypnotic the night before a dental appointment.

Chloral and derivatives

Chloral hydrate below and derivatives were formerly popular hypnotics for children. Chloral hydrate is now mainly used for sedation during diagnostic procedures.

Antihistamines

Some **antihistamines** such as promethazine hydrochloride p. 189 are used for occasional insomnia in adults; their prolonged duration of action can often cause drowsiness the following day. The sedative effect of antihistamines may diminish after a few days of continued treatment; antihistamines are associated with headache, psychomotor impairment and antimuscarinic effects. The use of hypnotics in children is not usually justified.

Melatonin

Melatonin p. 312 is a pineal hormone that may affect sleep pattern. Clinical experience suggests that when appropriate behavioural sleep interventions fail, melatonin may be of value for treating sleep onset insomnia and delayed sleep phase syndrome in children with conditions such as visual impairment, cerebral palsy, autism, and learning difficulties. It is also sometimes used before magnetic resonance imaging (MRI), computed tomography (CT), or EEG investigations. Little is known about its long-term effects in children, and there is uncertainty as to the effect on other circadian rhythms including endocrine or reproductive hormone secretion. The need to continue melatonin therapy should be reviewed every 6 months.

Anxiolytics

Anxiolytic treatment should be used in children only to relieve acute anxiety (and related insomnia) caused by fear (e.g. before surgery). Anxiolytic treatment should be limited to the lowest possible dose for the shortest possible time.

Buspirone

Buspirone hydrochloride is thought to act at specific serotonin ($5HT_{1A}$) receptors; safety and efficacy in children have yet to be determined.

HYPNOTICS, SEDATIVES AND ANXIOLYTICS › NON-BENZODIAZEPINE

Chloral hydrate

20-May-2020

● **INDICATIONS AND DOSE**

Sedation for painless procedures

▸ BY MOUTH, OR BY RECTUM

- Neonate: 30–50 mg/kg, to be given 45–60 minutes before procedure, doses up to 100 mg/kg may be used with respiratory monitoring, administration by rectum only if oral route not available.
- Child 1 month-11 years: 30–50 mg/kg (max. per dose 1 g), to be given 45–60 minutes before procedure, administration by rectum only if oral route not available, increased if necessary up to 100 mg/kg (max. per dose 2 g)
- Child 12-17 years: 1–2 g, to be given 45–60 minutes before procedure, administration by rectum only if oral route not available

Insomnia (short-term use), using chloral hydrate 143.3 mg/5 mL oral solution

▸ BY MOUTH USING ORAL SOLUTION

- Child 2-11 years: 30–50 mg/kg once daily (max. per dose 1 g), dose to be taken with water or milk at bedtime
- Child 12-17 years: 430–860 mg once daily (max. per dose 2 g), dose to be taken with water or milk at bedtime

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