

Short communication

Think twice before prescribing certain drugs to children

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Abstract

Codeine, tramadol, and hydrocodone have been associated with morbidity and death in children, secondary to respiratory depression. The aim of this paper is to increase awareness of this issue and to encourage clinicians to prescribe safer alternatives such as morphine, ibuprofen, or paracetamol.

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Keywords: Codeine; Tramadol; Hydrocodone; Narcotics; Opioids; Respiratory depression; Overdose; Children; Pediatric; FDA

Background

Since 2013, the Food and Drug Administration (FDA) has issued warnings regarding the use of codeine, tramadol, and hydrocodone in children,¹ as they have led to numerous deaths and near deaths secondary to respiratory depression.

Discussion

Codeine, tramadol, hydrocodone, and oxycodone are opioid drugs that are metabolised through the CYP2D6 gene. As CYP2D6 is highly polymorphic, its activity varies between individuals,² for example, codeine is rapidly converted to toxic amounts of morphine in certain children. Of particular concern are those who are obese or have lung disease, obstructive sleep apnoea, or other breathing issues.³ It is recommended that these drugs are avoided in children and breastfeeding mothers, although some over-the-counter cough and cold medicines contain codeine. Depending on the country in which you live, access to codeine can be easy, making it important to increase awareness of its potential adverse effects.

There is also a risk of addiction, particularly in opioid-naïve children. If these drugs must be used, carers should be educated about their risks and patients should be monitored continuously for apnoeic episodes in hospital. Genotyping and phenotyping² can be done to identify children at risk and help guide dosage. Morphine, however, may be the safest alternative for the control of moderate to severe pain.² Around-the-clock paracetamol or ibuprofen can also be used as an alternative.

In summary, these narcotics should be avoided in breastfeeding women, in children younger than 12 years and those between the ages of 12 to 18 if they have a potential for breathing problems.^{1,3}

Conflict of interest

I have no conflicts of interest.

Ethics statement/confirmation of patients' permission

Not applicable.

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