

Oral Abstracts

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RECOGNITION AND MANAGEMENT OF OVER THE COUNTER MEDICATION MISUSE

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Abstract: Misuse of Over-The-Counter (OTC) medications is defined as the use of the medication for a purpose not consistent with legal or medical guidelines. Misuse commonly has negative consequences, which may be social, psychological, physical or legal in nature. Misuse may result in dependence, intoxication, psychological disorders including depression and anxiety, and acute or chronic organ injury. Availability of OTC medications varies across international boundaries. Commonly misused OTC medications include compound analgesics containing codeine / paracetamol / ibuprofen, cough suppressants containing dextromethorphan or diphenhydramine, sleep aids containing doxylamine, weight loss preparations containing caffeine and ephedrine and motion sickness tablets containing dimenhydrinate. Misuse of compound analgesic OTC medications containing codeine can lead to opioid related adverse effects including drowsiness and constipation, and overdose characterized by potentially life threatening respiratory depression. Codeine based OTC medications containing ibuprofen can lead to gastrointestinal ulceration and perforation. Excessive chronic ibuprofen ingestion is also associated with life-threatening hypokalaemia occurring as a consequence of renal tubular acidosis (RTA). Published cases illustrate that both proximal and distal RTA can occur following ibuprofen misuse. These cases are characterized by hypokalaemia and a hyperchloraemic metabolic acidosis with evidence of excessive urinary potassium excretion. NSAID induced renal injury, which can include nephrotic syndrome and interstitial nephritis are thought to be caused by impaired synthesis of cyto-protective prostaglandins. However the mechanism by which ibuprofen causes RTA is not well understood, but may involve carbonic anhydrase inhibition, the function of which is crucial to renal acid-base regulation. Management of ibuprofen associated RTA involves cessation of OTC drug misuse and provision of supportive care including replacement of potassium and bicarbonate.

Learning Objectives:

1. List commonly available OTC medications associated with misuse and recognize the broad range of harm they may cause.
2. Describe the particular gastrointestinal, respiratory and renal adverse effects associated with codeine containing OTC medication misuse.
3. Understand the postulated causes and biochemical / clinical effects associated with ibuprofen induced RTA.
4. Understand the principles of managing ibuprofen induced RTA.