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# Self-medication for dental pain is a major cause of accidental overdose

Self-medication for dental pain with paracetamol is a significant cause of accidental overdose and morbidity. It has cost a leading teaching hospital nearly £50,000 in overnight admissions over a two-year period without including the medical care costs, a study published in this issue of the *BDJ* has confirmed.<sup>1</sup>

An average of at least three people a week were admitted to the hospital's emergency department with accidental paracetamol overdose during the study, which resulted in 123 overnight stays for the dental cases alone. The NHS estimates it costs £400 for an overnight hospital stay.

The authors of the *Dental pain management – a cause of significant morbidity due to paracetamol overdose* study are calling for improved access to dentists during the working week and better patient advice on using analgesia for dental pain.

The three British Association of Oral and Maxillofacial Surgeons (BAOMS) members, Laura O'Sullivan, Nabeela Ahmed and Andrew Sidebottom, reviewed the cases of 436 patients who attended the emergency department of a large teaching hospital over two years from May 2014 to April 2016. They set out to determine whether dental pain was a contributory factor in accidental paracetamol overdose, and what the resulting cost and burden was to NHS hospitals.

Co-author and OMFS trainee Laura O'Sullivan said: 'The safe paracetamol dosages, in common with many over-the-counter (OTC) medicines, are not fully appreciated by patients, dentists or GPs. And, patients are not aware that staggered overdoses of the painkiller carry a much higher mortality rate than a single large dose. Nearly all of the cases we reviewed (98%) resulted from staggered overdoses.'

Self-medication with paracetamol is now common for dental pain relief, and accidental overdose remains a major public health problem that impacts on emergency hospital admissions and admission to acute liver units.

Co-author Andrew Sidebottom explained that self-medication with paracetamol can continue for up to six months before the person seeks dental care, but that it's patient preference that's driving the choice for paracetamol rather than medical advice: 'But, as few as nine or ten paracetamol tablets a day can cause liver problems, so it is vital that patients adhere strictly to the instructions on the packet.'

Co-author and BAOMS trainee representative Nabeela Ahmed added that managing the primary cause of pain would reduce the risk of significant morbidity from paracetamol overdose: 'The data from our study found that 61.5% of the dental cases required admission to the acute medical unit.'

In a quarter of the cases (25%/436) the on-call maxillofacial team were called to review the patients who were suffering from a range of issues such as pulpitis, dental abscess and post-operative dental pain.

'Offering tailored medication advice will keep patients comfortable until an appointment with the dentist is available, and prevent accidental overdose,' said Laura O'Sullivan.

1. O'Sullivan L, Ahmed N, Sidebottom A. Dental pain management – a cause of significant morbidity due to paracetamol overdose. *Br Dent J* 2018; **224**: 623–626.