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## Hazards of codeine plus paracetamol compounds

Sir,

Codeine phosphate is a popular drug of abuse and is commonly taken in preparations combined with either aspirin or paracetamol. Preparations containing larger amounts of codeine (30 mg) are especially popular. Opiate tolerance may result in dependent individuals needing to ingest large amounts of these drugs, thus risking potentially fatal paracetamol or aspirin toxicity.

A 37-year-old woman recently attended the drug clinic at the Southern General Hospital, Glasgow as a result of dependence on Tylex® (Cilag) (containing codeine 30 mg and paracetamol 500 mg). She had initially been prescribed this for sciatica but she found that in addition to providing analgesia it also improved her mood. Her consumption increased and she supplemented her prescription by buying the preparation from 'street sources', taking up to 30 tablets daily and experiencing opiate withdrawal symptoms if unable to obtain them. Despite being warned of the dangers of this, she admitted at a subsequent appointment to having consumed 100 of these tablets over the previous week, 35 having been taken in the previous 24 hours, in order to improve her mood. A serum paracetamol level of 328 mg l<sup>-1</sup> was detected seven hours after the last dose and she was admitted for treatment with acetylcysteine. Her liver enzymes were elevated (alanine aminotransferase 48 IU l<sup>-1</sup> and gamma glutamyl transpeptidase 235 IU l<sup>-1</sup>) but fortunately her coagulation indices remained normal and she was well enough to be discharged after two days.

We have also had anecdotal reports from other drug abusers attending the drug dependency clinic of increasing availability of Tylex on the street.

It has previously been reported that opiate addicts abuse combinations of codeine and aspirin and are apparently able to

remove some of the latter;<sup>1</sup> with preparations such as Distalgesic® (Dista) (co-proxamol — dextropropoxyphene hydrochloride and paracetamol) concern has largely been focused on the opiate component<sup>2</sup> and there has been a resultant alteration in prescribing habits.<sup>3</sup> The increasing popularity of codeine and paracetamol preparations urges us to warn prescribers to be mindful, not only of the addiction potential and street value of codeine, but also of the potential toxicity of paracetamol in combination analgesics.

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## Pharmacist-GP liaison

Sir,

A research project involving a pharmacist and a suburban group practice was undertaken in 1992 to quantify and evaluate clinical and pharmaceutical interventions made by the pharmacist as a result of a medication review of elderly patients. Patients included in the study were those aged 75 years or over, living independently in the community and taking at least one regular medication. Computer held medication records for 85 patients were reviewed by the pharmacist and for another group of 66 patients, a home visit was made by the pharmacist in addition to a review of the medication record.

Among the 85 patients whose records

were reviewed, there were 40 instances where a drug was being prescribed which, according to the literature, had the potential to cause adverse drug reactions in elderly people. This represents 14.5% of the total number of 275 regular prescribed medicines being taken by these patients. Action was taken by the doctor to modify or monitor treatment following discussion with the pharmacist in 11 of the 40 cases (27.5%). Among the 66 patients visited by the pharmacist, the number of drugs similarly identified from literature sources, as above was 24 out of a total of 238 prescribed medicines (10.1%). Of these 24 medications, symptoms suggestive of an adverse reaction were reported by the patient in 17 cases (70.8%). Additionally, a further 16 drugs possibly giving rise to adverse drug reactions were identified following the home visit (6.7% of total prescribed medication). Of the 40 drugs identified among the group of patients visited by the pharmacist, action was taken by the doctor to modify or monitor treatment in 13 cases (32.5%). Among the two groups overall, drugs particularly likely to lead to adverse drug reactions in elderly patients were being prescribed for 43.7% of patients (66/151). Following reporting by and discussion with the pharmacist, the doctor modified or monitored treatment with 30.0% of these drugs.

The pharmacist was able to make a recommendation regarding some aspect of the medication for more than 80% of the patients; 28.8% of these recommendations (64) were taken up by the doctors. Action was taken most often (10 cases, 45.5%) when the suggestion concerned the dosage form, pack size or quantity of drugs prescribed. These were details which could easily be changed on the patient's computer record at the time of the doctor-pharmacist discussion. Recommendations for modifications to or monitoring of therapy which necessitated action at a future time, probably when the patient next visited the surgery, were less likely to have been acted upon (a total of 134 recommendations were made concerning medication