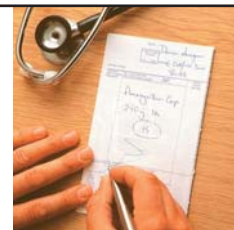




Cough mixtures: not always for cough



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This is the second article in a series of case files from general practice that explore treatment issues around substance use and commonly encountered general practice presentations.

BACKGROUND

Opioid based cough mixtures are readily available to the public and are generally used safely. However, like alcohol, their use can sometimes be a significant part of a dependence problem.

OBJECTIVE

This case study provides practical information for general practitioners in the detection, assessment and management of patients with cough mixture opioid dependence.

DISCUSSION

Opioid dependence is generally considered synonymous with heroin dependence or dependence on prescribed opioid analgesics. However, cough mixtures are a readily available source of opioids. People who become dependent on these mixtures commonly do not present for medical assistance until the problem is severe.

Case history – Paul D

As a rural general practitioner, you receive a call from the local pharmacist concerned about a young man who has bought a bottle of cough mixture on at least every other day for the past 3 weeks, and whom he believes to be opioid dependent. The pharmacist would like to inform this customer that cough mixtures will no longer be sold to him until he sees a medical practitioner. He asks if you would be willing to accept this referral. There is only one pharmacy and medical practice with three doctors in your town.

You recognise the name Paul D, now 19 years of age, as that of a patient you have treated for minor childhood illnesses, and more recently for a fungal rash. His mother is a local school teacher who mainly sees another doctor in the practice. His parents separated while he was in boarding school and he lived with his father for a few years after leaving school in year 10. He has recently returned to live with his mother and has started working in the local grocery shop. He smokes a packet of cigarettes a day and has no other significant medical history.

Effects of cough mixtures

Cough mixtures are a readily available source of opioids with a number of preparations containing enough opioids and amphetamine-like substances to cause intoxication and dependence.¹ Cough mixtures contain a number of ingredients that are attractive for their psychoactive effect, particularly:

- codeine phosphate (an opioid with central nervous system [CNS] depressant properties), and
- pseudoephedrine (an amphetamine based drug with CNS stimulant properties).

Antihistamines are included in some mixtures and add to a sedating effect.² These agents can produce intoxication, dependence and withdrawal. Heroin or diacetyl morphine was synthesised in 1898 and used successfully as a cough suppressant in Australia and around the world for many years before dependence problems resulted in its removal.

Somewhat surprisingly, Paul arrives the next day saying: 'The pharmacist said I should come to see you about the cough mixture'.

Cough mixtures are a legal and accessible source of opioids and amphetamine-like substances and people using them do not usually seek medical attention until their use is out of control. Given that there is only one pharmacy in the town, Paul may have felt pressured to attend for an assessment. However, he could also have chosen to ignore the pharmacist's advice and gone to another pharmacy in another town. The fact that he has made an appointment is a good sign he may recognise he has a problem and may have a level of motivation to address it.

What is achievable at the first appointment?

The most important achievement at the first appointment is to engage Paul. If this occurs it is more likely he will commit to ongoing treatment for his drug dependence. At some point you need to assess his level of drug use, motivation, dependence, and other factors (risk of self harm, psychiatric and other comorbidities, and supports) and complete a full medical and psychiatric assessment. In part, some of these can be assessed at this first appointment. How much you ask and what you cover will depend on the individual interaction on that day.

Your previous relationship with Paul may be an asset. However, the fact that your practice treats other family members may make Paul anxious about confidentiality issues and this needs to be addressed.

You begin by asking Paul what he thinks about having to come and see you. You let him know that as far as you're concerned he is the only one who can choose what he wants to do, but you are interested in his health and wellbeing and are willing to help if you can.

Assessment

You note that Paul has miosis indicating possible recent opioid use. When treating anyone with a drug problem, it is always advisable to document the absence or presence of intoxication at every appointment. This helps in assessing tolerance to drugs and helps reduce medicolegal risk in manag-

ing people who have a higher than normal risk of overdose. Assessment of dependence and tolerance includes questions on the:

- quantity
- frequency, and
- duration of cough mixture use.

This also allows you to assess the likelihood of withdrawal symptoms and their severity if use is abruptly discontinued. When tolerant to a drug of dependence, people generally take a drug not to 'get high' but to 'feel normal', and will develop withdrawal symptoms upon cessation.

Paul has been using cough mixtures to get high on weekends for the past year. During the past 2 months he has used a bottle of Nurofen[®] (cough mixture containing codeine phosphate and pseudoephedrine) every couple of days, and sometimes, particularly on weekends, he uses a bottle every day.

Paul is currently consuming a 200 mL bottle of a cough mixture that contains 298 mg of codeine and 1200 mg of pseudoephedrine over a 1–2 day period. This represents a significant amount of opiates and amphetamines.

To assess the presence of withdrawal, you ask: 'What happens if you go without your cough mixture for a day?' Since withdrawal results in the opposite of the effect of the drug, you would expect a mix of sympathetic arousal (opioid withdrawal), and sympathetic depression (amphetamine withdrawal) upon abrupt cessation.

Paul's symptoms of withdrawal include tiredness, mood lability (associated with amphetamine withdrawal), sweating, rhinorrhoea, lacrimation, 'gooseflesh' or piloerection, irritability, restlessness, agitation, malaise, musculoskeletal aches, nausea and diarrhoea (associated with opioid withdrawal).³

This information indicates Paul is opioid and perhaps amphetamine dependent with significant tolerance, and has been experiencing a mixture of opioid/amphetamine withdrawal

Family history
Paul's father is a strict teetotaler as there is a history of alcohol problems in his family, while his mother 'likes' a drink, especially since she separated

symptoms upon cessation of use. This is important information as there is a genetic risk associated with many addictive substances, with for example, a 50% lifetime risk of substance abuse among sons of alcoholic fathers, and an even higher risk among sons with an alcoholic mother.⁴

Understanding Paul's perspective

As discussed in the first article in this series (AFP April page 229–232) a key to motivating behavioural change is to understand the pros and cons of Paul's drug use for him. Sample questions for eliciting the role of drugs in a patient's life are given in Table 2 of the first article. You ask: 'Tell me the good things you

Paul originally started to use for the 'high' and to relieve boredom. However, although he initially gained pleasure and euphoria from use, he found he had to continually increase his dose to achieve this effect and now primarily uses so he will not feel unwell.

experience from using cough mixture?' You explain to Paul the development of tolerance, making the link between this and his need to use more to get the same effect and his current use just to avoid withdrawal symptoms. To assess additional negative effects of the drug, you ask: 'What other type of hassles/problems do you get from using it?' When the answer is not forthcoming, you ask specifically about:

- financial issues of buying cough mixture
- side effects of opioids such as constipation, and
- impaired cognition and psychomotor performance.³

Paul states he doesn't open his bowels every day but doesn't seem overly concerned. Finances limit how many bottles of cough mixture he buys (and cigarettes) and involvement in social activities. Paul's main hassle, apart from the need to continually use and the side effects, is putting up with questions from pharmacists about repeat purchases. Paul states that it was easier when he was living with his father in the city. Upon further questioning he acknowledges that in the city he relied less on cough mixtures as there was access to other drugs such as speed and ecstasy.

Treatment options

What can you do to help Paul? Services to people with problem drug use can be put in four broad categories using the mnemonic **EERR**:

- **Entry into treatment** – engagement and encouragement to enter treatment
- **Exit from drug use** – detoxification or cessation of the drug
- **Relapse management** – relapse prevention and management
- **Reduction of harm** – practical harm reduction when cessation is not possible.

Entry into treatment

General practitioners and pharmacists are the health professionals most likely to come across people in the community early in dependence, before they consider themselves to have a severe problem. Establishing rapport and engaging in discussion about the problem encourages the consideration of treatment. As Paul's GP, you will need to assess and manage factors which contribute to drug use. You reinforce to Paul your earlier statements that he has

developed a tolerance to the opioids and amphetamine based components of the cough mixture. You explain that he gets withdrawal symptoms and feels unwell because he is now 'used to', or tolerant to, the drug. You tell him that after cessation and completion of the withdrawal process these symptoms will not be present and he will not feel compelled to use just to stop feeling unwell. You ask if he would like help to withdrawal. Paul appears somewhat sceptical but reluctantly agrees to return to discuss this further.

On Paul's return, you again note he has miosis indicating recent opioid use. You ask him about his current home situation after ensuring he understands your commitment to confidentiality.

Paul says that his mother knows about the cough mixture, since in this small town, 'people gossip'. He states he would like to stop using so that his mother will get 'off his back'.

You ask: 'How can I help to get her off your back?' Paul doesn't know what you can do. You ask more about what is happening in his daily life.

Paul feels fairly isolated, having left his friends in the city. He feels trapped and often bored. Cough mixture at least initially provided an escape for him. He is not depressed or suicidal.

You reflect back your understanding that he has been feeling bored and lonely, and the cough mixture has helped him to escape from that. He nods. You ask: 'What else could you do around here? What type of things did you used to like doing?' This allows you to problem solve with Paul. Together you identify sporting activities he might like to get involved in and plan this as 'homework'. Paul agrees to return for regular follow up. You plan to simply provide sup-

portive encouragement to him.

Exit from drug use

If Paul decides to attempt to stop using cough mixture he is going to need regular support. It is often helpful to plan activities with him day by day including identifying what he can do to feel better and who he can identify to support him at home.

Contact numbers for drug and alcohol services in each state of Australia are listed in the previous article of this series (*AFP* April page 232). Local counselling services vary from region to region.

Information provision

There is evidence that explanation about likely withdrawal symptoms will reduce the intensity of withdrawal.⁵ Explain that he may feel like he has the 'flu' and suffering 'stress' at the same time. This explains the physical changes as well as the anxiety, insomnia and tiredness that he may experience. Symptoms should peak at around 2 days after cessation, gradually diminishing over 1–2 weeks, however, milder symptoms may continue for several weeks. Simple measures such as paracetamol, warm baths and exercise can help.

Medications to assist withdrawal

These are generally best used if a set date for cessation is predetermined, as using medications for a prolonged period risks dependence. Options include clonidine to reduce symptoms of opiate withdrawal (75–150 µg up to four times a day) and diazepam (5–10 mg up to four times a day) tapering off by about 5 days. The use of clonidine is limited by hypotension. Rural GPs and some metropolitan GPs can admit patients to hospital for a supported detoxification, and some drug and alcohol services are able to support patients in home detoxification.

Relapse management

As Paul increases his activity in other areas it is likely he will have less need of cough mixtures. However, the provision of ongoing support is important in relapse prevention. It

is also essential to tell Paul that relapse does occur and that if it does he should not feel ashamed or give up. As his GP you ask Paul to see you quickly should he think about using or return to use.

Reframing relapse

Relapse is commonly interpreted by the patient and family as 'failure'. It is preferable to reframe it as 'a minor step backward', or a 'positive learning event'. Rather than focussing on relapse, emphasise the 2 weeks of abstinence since cessation and withdrawal and elevate this as a major success, with a small set back. This reinforces positive progress and prevents relapse as being a reason for further drug use. Importantly, this also lets Paul know that your door is always open and that relapse is not an impediment to seeing you. Paul also needs to be regularly assessed for depression and coexisting mental health disorders.

Reduction of harm

What if Paul is unable to stop despite multiple attempts? Harm reduction is not new to general practice. There are many illnesses that cannot be cured but we help people reduce their risks of further complications. Similarly there are times when ceasing a drug at a certain point is not realistic. We can still improve health by focussing on other factors such as diet, exercise, and mental health issues, and by treating other medical conditions as they arise. Maintaining a relationship means that the door remains open to treatment options when the time is right.

Conclusion

Psychoactive drugs are readily available both legally and illegally. Commonly, young people will experiment with a variety of drugs at different times. Cough mixtures contain drugs that can lead to dependence, tolerance and withdrawal. While the range of drugs is enormous and we may not have set management guides for all drug problems, GPs with their skills in patient management play a very valuable role in the identification and management of drug use.

Conflict of interest: none declared.

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