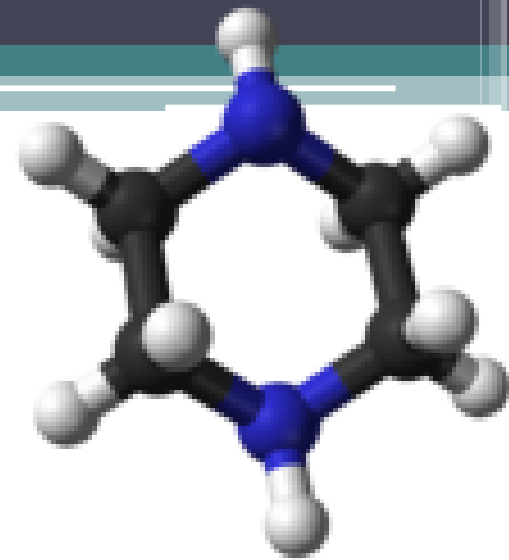


Cyclizine

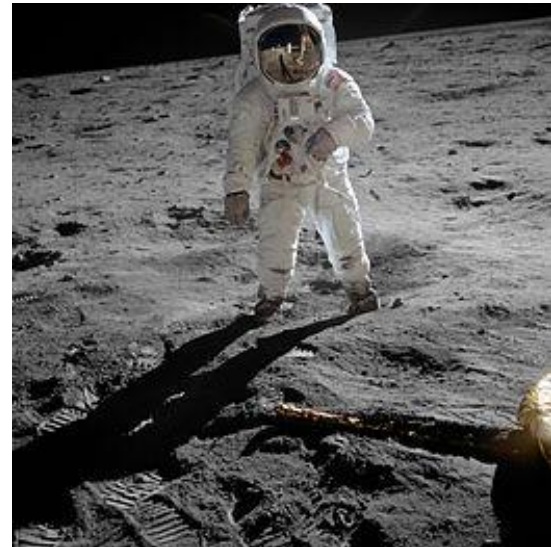
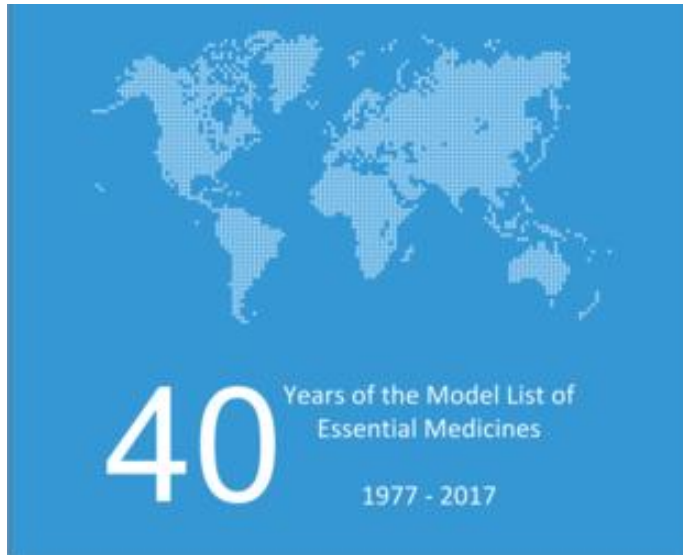
A decorative graphic consisting of a solid teal horizontal bar that transitions into a series of three thin, parallel white lines on the right side of the slide.

Pharmacology

- Piperazine derivative
- Antihistamine activity
- Likely vestibular and CTZ effects
- Anticholinergic/ antimuscarinic



Fun Facts



How does it give you a high?

- Anticholinergics give feelings of euphoria
- Can also give pleasant hallucinations
- Can last ~2 hours



Cyclizine Abuse among a Group of Opiate Dependents Receiving Methadone

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Summary

Twenty opiate dependents receiving long-term prescriptions of oral methadone, were identified as being habitual abusers of the anti-emetic drug cyclizine. A semi-structured interview elicited the dosage of cyclizine used, its effects, the reasons for starting and persisting with abuse of cyclizine and the attitudes of the patients to it. Cyclizine was taken in large doses intravenously with methadone. The effects initially were of intense stimulation, often with hallucinations, sometimes with aggressive behaviour, and occasionally with epileptic fits. Subsequent depressive mood changes occurred often accompanied by a craving for cyclizine. Tolerance to the drug occurred but no clear cut withdrawal syndrome is apparent. It seems that dependence upon cyclizine occurs. The significance of these findings for doctors, pharmacists and for drug treatment units is discussed. The paucity of information on the pharmacology and pharmacokinetics is noted.

Introduction

The Trent Regional Addiction Unit, based at Mapperley Hospital in Nottingham, provides services for problem drug users from five health districts with a total population of approximately 1,500,000. For many years it has run a programme of methadone prescription to stabilize drug use amongst opiate dependents.

About 120 individuals currently receive regular prescriptions of methadone, many on a contracted reducing regime, but others on a more prolonged 'maintenance' programme. Oral methadone (either tablets or methadone mixture DTF 1 mg in 1 ml) is used. No injectable drugs are supplied.

It is well recognized that many individuals who are dependent upon opiate drugs also abuse a variety of other psychoactive substances (British Medical Journal, 1979). In this unit all those receiving prescriptions of methadone have frequent

urine screening for commonly abused substances. In recent years cyclizine abuse has become increasingly common in the clinic population and this study was undertaken in an attempt to discover, from the patient's point of view, why this should be so and to obtain a subjective account of the effects of this drug when taken by opiate dependents.

Cyclizine is used therapeutically as an anti-emetic agent, the normal dose being 50 mg 4-6 hourly. It is recommended for the treatment and prevention of motion sickness, post-operative vomiting, and Menieres disease (Dundee & Jones, 1968).

Cyclizine is available as an 'over the counter' preparation. In the U.K. its trade names are Valoid and, formerly, Marzine. Since this study, the formulation of Marzine has been changed. Cyclizine has been replaced by 15 mg of the anti-emetic cinnarizine. Marzine is now out of favour as a drug of abuse. Both preparations were sold in tablet form,

Table 1. *Details of Reported Cyclizine Usage*

Subject	Dosage per injection (mg)	Tolerance?	Taken on its own?	Length of action (min)	
				On its own	With an opiate
1	50-200	Yes	No	N/A	120-180
2	400-550	Yes	Yes	30	120
3	50-200	No	Yes (orally as anti-emetic)	N/A	300
4	50-200	No	Yes (once only)	60	120
5	250-750	No	No	N/A	360
6	250	No	Yes (once only)	120	360
7	150	No	Yes (rarely)	60	A few minutes
8	150-300	No	Yes (orally once only)	N/A	20
9	100-350	No	Yes (once only)	Don't know	60-120
10	100-200	Yes	Yes (twice only)	30-60	180
11	150-?	Don't know	Yes (once only)	2	Longer ?how long
12	150-250	Don't know	Yes (orally as anti-emetic)	N/A	20
13	50-500	Yes	Yes	120	120
14	100-500	Yes	Yes (rarely)	30	60
15	150-750	Yes	No	N/A	120
16	50-300	Yes	No	N/A	30
17	150-800	Yes	Yes (rarely)	30	90
18	100-500	Yes	Yes (once only)	240	Don't know—always injects again
19	100-300	No	No	N/A	60
20	150-?	Yes	Yes	420	Longer ?how long

Table 2. Reported Effects of Faking Cyclizine

Subject	Fits?	Visual	Hallucinations		Effect of mood		Feel or act violently?
			Auditory	Tactile	During	Afterwards	
1	No	Yes	Yes	No	Good	Depressed, suicidal	Yes, feels aggressive but can contain it
2	Yes	Yes	Yes	No	Relaxed, vacant	Very depressed, no initiative	No
3	No	Yes	Yes	No	Good	Depressed and irritable	Yes, irritable afterwards but never violent
4	No	No	No	No	Speedy or drowsy	Sometimes depressed, craves for cyclizine	Yes, feels aggressive but never does anything
5	No	Yes	Yes	No	Speedy	Lost, miserable, tearful—wants another fix	Yes, Attacked wife with a knife
6	No	Yes	No	No	Sometimes good, sometimes bad	Edgy, wants more of something—usually cannabis or alcohol	Yes, easily annoyed, edgy irritable, but never violent
7	No	No	No	No	'High'	Always 'low', needs to take an opiate	Yes, felt violent but never been violent
8	No	No	No	No	Detached	Depressed and irritable	Yes, feels nasty towards people but never violent
9	No	No	No	No	Speedy, euphoric	Very 'down', slow and drowsy	Yes, callous and snappy. Been involved in fights
10	No	Yes	Yes	No	Good, speedy	Depressed—needs 'downers'	Yes, feels irritable. Never been violent
11	Yes	No	Yes	No	Good, wants more	Nothing special	No
12	No	No	No	No	Depressed, apathetic	Back to normal quickly	No
13	Yes	No	No	No	Happy, but cannot communicate	A bit depressed—always wants more cyclizine	No
14	No	Yes	No	No	Slightly 'high'	Very low, craving for another hit of cyclizine	No—slightly irritable
15	No	Yes	Yes	No	Chirpy, talkative happy but jumpy	Tired, moody and blank	No
16	Yes	Yes	Yes	Yes	Speedy, jerky, not happy or sad	Very severely depressed wants another 'hit' of cyclizine	Yes—feels powerful and very strong. Has attacked friends and strangers
17	No	Yes	Yes	Yes	Elated, speedy, happy	Very severely depressed so wants another 'hit' of cyclizine	Yes (high doses)—very angry. Hit people and often smashed up furniture
18	No	Yes	No	No	Speedy, cheerful, on top of the world	Always wants more cyclizine, very depressed, has felt suicidal	Yes—Feels a bit edgy, but never violent. Makes him argue with people
19	No	No	No	No	'High' and nice	Low, 'crappy', depressed. Always wants a 'hit' of something	No
20	No	Yes	Yes	No	Active	'Down'	No

Table 3. *Attitudes to Cyclizine Use*

Subject	Is it difficult to stop taking cyclizine?
1	Yes. Need it to boost methadone.
2	Yes. Easy to get—not illegal.
3	Yes. Liked the way it enhanced methadone.
4	No.
5	Yes. Didn't want to lose the 'rush'.
6	Yes. Enjoyed the 'rush', and feelings of madness.
7	No.
8	No.
9	Yes. Liked the rush. Craved + + +. Felt ill without it.
10	Yes. Methadone no good without it. Craved + + +.
11	Yes. The rush is attractive.
12	Yes. Methadone on its own lacks something. Takes months to get over using it.
13	Yes. Liked the 'rush'. Needed it to make opiates last longer.
14	Yes. If easily available would still use it.
15	Yes. Feels sick and achy without it.
16	Yes. Depressed and suicidal without it. Craved. Wanted the 'hit'.
17	Yes. Feels too nice to give up. Its physically and mentally addictive.
18	Yes. Addictive because of the 'rush'. Methadone boring on its own.
19	No.
20	Yes. Gets knots in the stomach.

Case report

The misuse/abuse of antihistamine antiemetic medication (cyclizine) by cancer patients

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Cyclizine is an antihistamine, which is frequently used to manage nausea and vomiting in cancer patients. Antihistamines can be drugs of misuse/abuse, and the article describes four cancer patients who developed such problems after receiving parenteral cyclizine within the inpatient unit of a cancer centre. The article also briefly reviews the literature on the misuse/abuse of cyclizine and other antihistamines. *Palliative Medicine* (2008); 22: 869–871

Key words: cyclizine; neoplasms; substance-related disorders

Introduction

Cyclizine is a H1 receptor antagonist ('antihistamine'), which has a marketing authorisation for the treatment of nausea, vomiting and vertigo associated with a number of different conditions in the United Kingdom.¹ Indeed, it is frequently used to manage nausea and vomiting in patients with cancer in the United Kingdom. We would like to report a series of cancer patients that developed problems relating to misuse/abuse of cyclizine following therapeutic administration of the drug within the inpatient unit of a major cancer centre.

Case histories

Case 1

The patient is a 50-year-old woman with multiple myeloma. She developed chemotherapy-related nausea, which did not respond to oral cyclizine, but settled with regular intravenous boluses of cyclizine. On discharge, she requested to continue to use parenteral cyclizine, and it was agreed that she would give herself regular subcutaneous boluses of the drug. Subsequently, the haemato-oncology team became aware that she was giving herself multiple intravenous boluses of the drug via her Hickman line (i.e., more than the recommended frequency/dosage). Moreover, she was obtaining supplies of the drug from the

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haemato-oncology team, the general practitioner, and also from the 'out of hours' primary care team.

Initially, the patient was unwilling to acknowledge that there was a problem. Nevertheless, a strategy was put in place to limit access to the drug, to gradually reduce the dose of the drug and to gradually substitute the oral route for the intravenous route. In addition, she was given emotional support by a clinical psychologist and citalopram for a concomitant clinical depression. Subsequently, she admitted to the team that she had injected herself with cyclizine to make herself feel 'happy'. The strategy was successful in discontinuing the cyclizine, although the process took some time, and there were a number of significant setbacks. She is currently receiving granisetron for chemotherapy-related nausea and vomiting.

Case 2

This patient was a 25-year-old man with acute lymphoblastic leukaemia. He was prescribed intravenous cyclizine for acute chemotherapy-related nausea and vomiting. After a few days, the nursing staff reported that he had been asking for the drug to be injected more rapidly. It transpired that he got a 'buzz' when the drug was injected rapidly but not when it was given slowly. On discussion with the patient, it was agreed that an alternative antiemetic should be used to manage the ongoing nausea and vomiting.

Case 3

The patient was a 16-year-old boy with an embryonal rhabdomyosarcoma. He developed nausea and vomiting