Case Study

Substance misuse and depression: case study and application of cognitive psychotherapy

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Patients who are depressed and are actively misusing substances are a challenging group to treat. They have high attrition rates, high relapse and suicide rates, more hospitalisations, poor compliance with medications and increased rates of forensic contact and of homelessness. Patients with substance misuse disorders are two to three times more likely than the general public to be diagnosed with dysthymia or major depression.[1] Overall, about 37% of patients with substance misuse disorders have co-existing Axis 1 disorders, while about 29% of patients with psychiatric disorders have co-existing problems with drugs or alcohol.[2]

The Camberwell study reported that about one-third of patients attached to a community mental health team had concurrent alcohol or substance misuse problems.[3] Increased rates of co-morbidity may result from environmental or genetic factors. Substance misuse may lead to psychological problems; psychiatric illness may lead to self-medication with psycho-active substances; and psychiatric problems may be secondary to associated social problems of substance misuse.[4,5]

Treatment of this group has broadly consisted of psychological, pharmacological and social interventions. For several years, we have been using cognitive therapy to treat patients with substance misuse, and there is some evidence of its efficacy; however, more trials are needed.[4,5] Cognitive behavioural therapy (CBT) has been shown to be effective in the treatment of psychiatric disorders that co-exist with substance misuse. The use of cognitive therapy in the management of depression is widely accepted in the clinical community. Cognitive therapy has been shown to be at least as effective as pharmacotherapy in terms of acute symptom relief of depression[6] and also has a more enduring effect not found with other approaches.[7]

Case report

The following is an account of Brian, a 33 year old single, unemployed father of three who has a history of polysubstance misuse and recurrent depression, who has been attending an inner city methadone maintenance programme in Dublin for the past two years. He presented with a 10 week history of depression with biological symptoms, unresponsive to medication. He complained of low self-esteem and ideas of worthlessness. He had a pessimistic view of the future, stating: "I can't see anything ahead for me." He described a passive death wish but denied any active suicidal ideation. He is positive for hepatitis C and continues to misuse heroin and cocaine occasionally. On this occasion, he did not respond to a six week trial of paroxetine 60mg daily, and so this was switched to venlafaxine 150mg daily which was titrated upwards over time. Medications were dispensed daily in the clinic, and swallowed in front of the nursing staff to ensure maximum compliance.

Brian had a previous depressive episode two years ago, and was hospitalised for four months. He responded to a full course of paroxetine medication. At that time, he also attended individual sessions with the team social worker, and attended a few group therapy sessions on developing coping skills. However, he disengaged from both therapies after only a short period of time.

Brian is the youngest of five children. He denied any family history of psychiatric illness. Although he is very close to his elderly parents, he minimises his problems because he is afraid of worrying them. His parents appear to provide a secure base and somewhat buffer the interpersonal relationship problems he experiences with his siblings. He is close to one of his sisters, but feels rejected by his other siblings and attributes this to his use of drugs and positive forensic history. He reports that they are successful; have good jobs, own their own businesses and are happily married with children. He describes himself as the "black sheep" of the family.

He was bullied throughout primary and secondary school. Academically, he had difficulties with maths and Irish and, although he received extra tuition in these areas, he was often punished and ridiculed in front of his classmates. He left school at the age of 14 years, after failing to pass any exams. At 15 years, his girlfriend gave birth to their first son. At 18 years, Brian commenced drinking alcohol and taking benzodiazepines monthly. He smoked cannabis regularly. At 21 years, he progressed onto heroin, injecting immediately. His three children currently live with their mother, and he rarely sees them.

Brian was considered for a trial of CBT because he was clinically depressed, had low self-esteem and failed to respond to an adequate course of paroxetine medication. He was quite bright, related fairly well to people and was moderately psychologically minded. Following discussion, he was keen to try another form of therapy, and so we agreed to a time-limited trial of individual CBT.

Case conceptualisation

"A formulation is a way of explaining and understanding the relationship between a person's inner life and their outer life that is the product of their personal history, it explains present difficulties and guides future therapy."[8]

Brian had several difficulties in childhood and adolescence,

which predisposed him to drug misuse. These difficulties influence the development of schemas, beliefs and conditional beliefs.

Course of therapy

All sessions were structured according to Melanie Fennell's guidelines:[9]

- Set the agenda.
- Review of events since previous session, feedback on last session, homework.
- Review.
- Agenda items prioritised and discussed.
- Homework set collaboratively.
- Feedback.

Early therapy

At the start of therapy, Brian completed the Beck Depression Scale (BDI)[10] and Beck Hopelessness Inventory (BHI)[11,12] scoring 31 on the BDI (severe range) and 16 on the BHI (severe range). These rating scales were repeated at intervals throughout therapy in an attempt to objectively monitor his progress.

We collaboratively constructed the following problem list, which was the focus of therapy:

- Drug misuse and the possibility of relapse.
- Relationship difficulties with siblings.
- Unemployment.
- Social isolation.
- Lack of contact with his own children, perpetuated by his own fears of rejection and of "causing trouble".

On completion of the problem list, he prioritised and listed his treatment goals (as outlined below). He acknowledged that he would probably not be able to "fix" all his problems in such a short time.

- To say no to drugs.
- To get on better with my sisters and brother.
- To find a job.
- To make new friends who don't use drugs.
- To become a good man, so that "my children can be proud of me."

He identified drug misuse as one of his main problems, and his treatment goal was to develop the ability to say no to drugs. We therefore identified risky situations,[13] in which Brian was more likely to use drugs. These included: following arguments with siblings, when alone and bored, when he obtained large sums of money, when he ran into old friends involved in the drug scene.

We then explored several of these situations, and using Greenberger and Padesky's Hot Cross Bun model (see Figure 1), we identified his cognitions, emotions, physiology and behaviour during a risky situation.[13] This helped him understand the connection between his thoughts, emotions, physical response and behaviour. He had difficulty identifying his emotions, which is not unusual given his history of drug misuse.

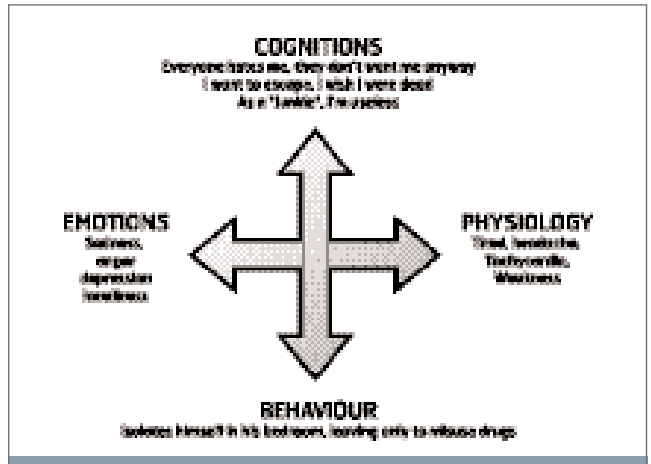

Figure 1. Greenberger and Padesky's Hot Cross Bun model (e.g. following an argument with his sister)

We then outlined the advantages and disadvantages of drug use.[13] He was able to identify positive and negative consequences of drug use; however, he minimised the negative ones. Using guided discovery, I helped him list the advantages and disadvantages of using and not using drugs. These provided us with an objective, rational and accurate view of his habit and allowed us find other alternative strategies for achieving the same advantages.

We then explored what he would have to do in order to relapse and how he would feel if this were to happen. Given the likelihood of relapse at some stage in the future, we decided to do 'stress proofing'.[13] This involved 'blueprinting', identifying challenging situations, possible coping strategies and developing the ability to deal with setbacks.

Middle therapy

Homework is an important part of CBT. Brian completed an activity schedule[13] as part of a homework assignment for the following week. In this, he rated his mood for each hourly activity and then looked for any connections between activity and mood. He noted that his mood was generally better when he kept himself busy.

Soon after, his father suffered a myocardial infarction and was subsequently hospitalised. Given the fact that his father remained in hospital, Brian was more active than usual, attending to his mother as well as daily visits to the hospital. He also realised that his parents needed him, and that he could be responsible and caring. On completion of an activity schedule, he noted that his mood was brighter, and attributed this to being more active, as well as feeling needed and loved.

We then reflected upon Brian's relationship with his own sons, which he was somewhat reluctant to discuss. He admitted to feelings of sadness and loneliness, and he

Table 1. Daily thoughts record (DTR)13

Situation	Moods	Automatic thoughts (images)	Evidence that supports the 'hot thought'	Evidence that does not support the 'hot thought'	Alternative/ balanced thought	Rate moods now
Who? When? Where?	Rate intensity of mood (0-100%).	What was going through my mind? What am I afraid would happen? What is the worst thing that could happen if this were true?	Write factual evidence which supports the 'hot thought' in previous column Avoid mind-reading and interpretation of facts.	If someone close to me had this thought, what would I tell them? If they knew that I was thinking this,what would they say to me? Am I jumping to conclusions?	Based on the evidence, is there an alternative way of thinking about this? What is the worst, best and most realistic outcome? Rate strength of belief in alternative thought (0-100%).	Re-rate moods from column 2 and rate any new moods (0-100%).

desperately wanted to visit them. He stated that "he wouldn't be of any use to them, unless he was clean" (i.e. abstinent from drugs). I identified his underlying assumption — 'If I use drugs, then I'm a bad person; if I don't use drugs, then I'm a responsible person.' I noted Brian's obvious discomfort while discussing his own children, and he admitted that he found it difficult; it was a "sore point".

We agreed that this issue would be best discussed at a later date, perhaps during more long-term psychotherapy, and that a time-limited trial of CBT was probably not the most appropriate setting. Nevertheless, it was important to identify this issue as a problem, empathise with him and offer him an opportunity to come back to it at a later date.

Later therapy

Issues of low self-esteem (which may be related to drug misuse), unemployment and his history of crime were then explored. Over a number of sessions, we explored Beck's cognitive model of low self-esteem,[14] and collaboratively worked through Brian's early experiences, identifying his dysfunctional assumptions and beliefs.

We endeavoured to explore his thinking further by using the daily thoughts record (DTR), which we completed during a therapy session.[13] The DTR consists of five columns for listing and describing situations, emotions, automatic thoughts, rational responses and outcomes. Initially he had difficulty formulating rational responses; however, I found that asking open-ended questions was useful in generating such responses. Brian was surprised and encouraged at how much his belief in his previously rated automatic thoughts had changed, and how his emotion had also changed.

I found this useful in teaching Brian how to regulate his mood without drugs and change his behaviour. I assigned a DTR as homework to be reviewed at a later session.

Outcome

Following only six sessions of CBT, given in combination with a course of venlafaxine 150mg daily (administered at that dose for two weeks prior to the commencement of CBT), there were clear improvements in his mood, levels of hopelessness, as well as overall social functioning. BDI scores decreased from 31 (severe depression) at the start of therapy to 20 (mild/moderate depression) at the sixth session. His level of hopelessness also improved: BHI scores decreased from 16 (severe range) to 7 (mild range). A score of 9 or more on the BHI could be predictive of psychological distress associated with deliberate self-harm.

He learned to identify his negative automatic thoughts (NATs), underlying assumptions and core beliefs and relate these to his behaviour, physiology and mood, which he later found helpful in attempting to change his behaviour.

The advantage-disadvantage analysis improved his ability to say no to drugs, which lead to an improvement in his self-esteem. The activity schedule helped him realise that his mood improved with increases in activity, and that he was less likely to use drugs when he kept busy. Identifying high risk situations and subsequent avoidance of these minimised his risk of relapse.

Discussion

This paper clarifies the method of delivering cognitive psychotherapy to a depressed patient with a history of substance misuse. It may be of value in the treatment of patients engaged in substance misuse programmes or in the setting of primary care. The patient described benefited in terms of mood, hopelessness and overall social functioning, where pharmacotherapy alone has failed. He managed to achieve some of his goals; however, we did not manage to address important issues such as interpersonal relationships, re-establishing contact with his children and obtaining

employment. These issues would be more appropriately addressed in a more long-term therapeutic setting.

The main limitation of therapy was the fact that Brian was only seen for a limited period of time. He disengaged from therapy after only six sessions, which may be partly explained by his father's deterioration in health. The duration of therapy was also limited given the therapist's change of employment. Moreover, there are many other interesting factors which may have influenced the breakdown of the therapeutic relationship, and these are discussed elsewhere.[15]

Pharmacotherapists may argue that the choice of antidepressants used and/or their duration of use was inadequate. Furthermore, because there was no control condition for the intervention, we can only hypothesise that the alleviation of symptoms was due to a combination of CBT and medication. From the patient's perspective, Brian attributes his positive outcome to a combination of CBT and pharmacotherapy; however, he describes a more positive experience with CBT. In general, CBT is a far more acceptable form of therapy for many patients compared to pharmacotherapy.

Finally, larger scale treatment intervention studies are needed to establish the effectiveness of a combination of CBT and pharmacotherapy, specifically in the management of substance misuse and co-morbid depression. Such research will enhance our understanding of the complex interplay between psychological, social and biological factors. Mental health specialists, with medical or non-medical backgrounds, may effectively deliver this form of therapy. It is useful for the therapist to have knowledge of the application of CBT, and recognise when referral for psychotherapy is appropriate.

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