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# Symptoms or Side Effects? Methodological Hazards and Therapeutic Principles

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The case is described of a 40 year old man with delusions and hallucinations, who at the start of this study was taking doses of neuroleptic medication greatly in excess of those that have been demonstrated to be optimally effective. Over 48 weeks, using PQ methods and detailed interviewing, his progress was charted as the medication was reduced to more appropriate levels. Across this change, his delusional beliefs remained unchanged, but there were substantial reductions in auditory hallucinations, as well as in hopelessness and anxiety. The case has implications for concepts of therapy in the psychoses and for the methodology of therapy studies. It also illustrates possible benefits of using PQ or other self-assessment methods as a means of calibrating therapy and perhaps enhancing compliance.


KEY WORDS — neuroleptics; quality of life; dysphoria; dosage

## INTRODUCTION

There is increasing research interest in the possibility of studying the effects of cognitive-behavioural interventions in psychotic disorders, both as direct therapeutic interventions and as a means of enhancing compliance with psychotropic medication (Chadwick and Lowe, 1990; Kingdon and Turkington, 1991; Tarrier *et al*., 1993; Haddock *et al*., 1993; Chadwick *et al*., 1994; Garety *et al*., 1994; Kingdon *et al*., 1994; Chadwick and Birchwood, 1994; Kemp *et al*., 1996; Sharp *et al*., 1996). Such studies face the methodological problem of delivering interventions against a backdrop of ongoing neuroleptic medication. In the case of treatment studies of acute psychotic episodes, this raises the possibility that demonstrated benefits owe more to concurrent medication than they do to any novel intervention. But there are also the less commonly noted possibilities that non-pharmacological strategies may fail to demonstrate efficacy either owing to the effects of concurrent medication, by virtue of the side-effects produced by that medication, or that efforts to standardise a psychotropic regime may produce benefits later misattributed to the non-pharmacological intervention.

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The possible detrimental effects of pharmacotherapy become clearer in chronic cases where by definition medication has failed to produce a resolution of the psychotic state. In such cases, the dose of antipsychotic medication will often have been pushed up on the basis that treatment resistance to supposedly therapeutically specific agents sometimes stems from pharmacokinetic factors such as malabsorption. Over the five decades since the first introduction of neuroleptic agents, the doses employed have escalated for reasons such as these, leading to 'megadose' regimes in the late 1970s and early 1980s. More recently it has become clear that such regimes offer no therapeutic advantages. Reviewing the field in 1988, Baldessarini and colleagues suggested that there was a diminishing likelihood that therapeutic benefits would be obtained from doses of chlorpromazine greater that 600 mg/day or haloperidol greater than 30 mg/day (Baldessarini *et al*., 1988). Since then a number of studies have suggested that the optimal dose of haloperidol may actually be of the order of 5 mg/day (Van Putten *et al*., 1990; Rifkind *et al*., 1991).

Doses of this order seem sufficient to block the proportion of D-2 receptors ordinarily associated with therapeutic responses (Farde *et al*., 1988, 1992). Doses in excess of this are likely to be associated with an increasing ratio of side effects to benefits. Part of the clinical problem, however, lies

in difficulties in distinguishing the symptoms of a psychotic disorder from the side effects of medication. Both may produce demotivation, negativity, akathisia, nervousness and dysphoria (Healy, 1996; Day *et al.*, 1995; Healy and Farquhar, 1998); medication may even produce auditory or visual hallucinations. A further problem of side effects is that an individual may interpret them as evidence supporting their delusional beliefs — for instance that the person who is persecuting them makes them sweat profusely, gives them headaches or perhaps has inserted steel rods in their limbs making them stiff.

Such difficulties might be overcome if there were an agreed intermediate term target for medication, such as a patient report that the medication appears to be producing a beneficial tranquillisation (May *et al.*, 1976), but at present there is no such agreed measure (Healy 1989, 1990; Fear and Healy, 1996). Alternatively, close and regular monitoring of problem experiences while medication is manipulated may help distinguish between experiences that stem from side effects, giving rise to emotional distress in their own right, and symptoms that stem from an underlying disorder. Regular assessments of aspects of symptomatology over time may provide the assessor with concrete evidence of fluctuation over time. A potential benefit of closely monitoring any reduction of medication is that it might provide evidence that side effects are being minimised without a loss of therapeutic efficacy. As a first step in psychological therapy, such data could then be used to demonstrate to the client that some symptoms may stem from their medication rather than from the attentions of a persecutor.

In this paper, we report on the gradual reduction of neuroleptic medication in one individual over a period of 48 weeks. Delusional phenomenology was repeatedly measured throughout medication reduction. No attempt was made to alter SJ's[1] beliefs by psychological intervention. At the start of the assessment period the subject presented primarily with a complex and elaborate system of delusional beliefs and auditory hallucinations, which greatly distressed him. He complained about various unpleasant physical sensations which were interpreted in a manner in keeping with his belief system; he specifically did not attribute these sensations to his medication.

[1]The subject's initials have been changed to ensure anonymity. He had seen this report and consented to its publication.

## METHOD

### *Case history*

At the time of the study, the subject (SJ) was 39 years old, living alone in a private bedsit. His father was still alive and in occasional contact. His mother had died when he was 14 years old following a long period of serious illness which culminated in unsuccessful neurosurgery on a brain tumour. He still recalled with distress her growing incoherence during the final stages of her illness. After his mother's death, his father was made redundant and became aggressive. Unable to tolerate the aggression, 2 years later he moved out, got a job in a menswear retailers and at the age of 18 married and remained married for two years. His wife had an affair and they divorced. This led to an overdose of aspirin and a self-referral to hospital. He began going to the pub after work and drinking 10–12 pints, but continued to hold down a job during this period.

In early 1979, at the age of 27, he first heard voices coming from outside his head while at work. In 1980 he began to feel too ill to work. Between February 1982 and June 1988 he was admitted to hospital 15 times, with a mean length of stay of 3 months per admission. From 1988 through to the start of this study he remained out of hospital maintained on haloperidol 300 mg IM two-weekly.

### *Psychiatric state at start of the study*

SJ believed he was the illegitimate son of the Queen through an incestuous relationship. He felt that a Masonic-like organisation with privileged members called the CTP ('certain type of person') had announced his royalty throughout the country and that it was well known around the town. The CTP were also responsible for spreading false rumours around town that he was homosexual. On the council for the CTP was a Mr Waverley who was responsible for persecuting him via telepathy, in a bid to prepare him to become a CTP. He believed that he was on the right telepathic wavelength to receive these communications as he was a Royal and all members of the Royal Family have these telepathic powers.

At the time of the study, he felt he had been persecuted for years in many ways which made him despair. He had evolved many idiosyncratic terms to describe the unpleasant 'persecutory' sensations, e.g. 'hissabubbling of the eyeballs', 'clappering'

 

(extreme pressure weighing on his head), having pieces of wire circuit inserted in him to hold his head on and into his limbs causing stiffness, 'sweaty betty' (severe night sweats), and a condition he called 'oversaturation of nutrition of the body organs', a state in which the body organs had been over-producing uric acid causing him to smell of urine. He believed he only had a third of his brain connected and that he was still really only 14 years old. He believed that he had been put on 'the circuit', a state that members of the CTP join if they make the mistake of taking in too many minerals. To get off the circuit he had to observe many strict and complex dietary rules.

At the time of this study he had occasionally experienced visual hallucinations. He was more troubled, however, by regular auditory hallucinations with up to five different voices, one of whom had the character of his persecutor James Waverley. Persecution could also take the form of telepathy, at which times the voices got unbearably loud. SJ's usual tactics were to go to bed when he felt an attack coming on, to take a temazepam tablet and to engage in rituals to ward off the attack, such as 'clock watching' which involved watching his digital watch for a particular series of numbers whilst holding it in a particular position against his face, 'oddling potential' which was shutting the curtains so that there is no gap at the top for people to see in, and 'do as you usually do' a set bedtime routine involving, amongst other things, brushing his teeth in a particular fashion, turning off the light in a certain way and arranging the duvet cover so only a particular pattern was visible. These rituals often kept him busy for hours.

*Assessments*

SJ was asked firstly to make a rating of degree of conviction in his primary belief, in the form of a percentage rating (per cent conviction); subsequently, his degree of belief conviction and preoccupation with the belief were assessed using Phillips' (1977) modified form of Shapiro's (1961) Personal Questionnaire (PQ) (Brett-Jones *et al*., 1987). This technique assesses changes in symptom intensity specific to an individual subject. It was adapted to measure the amount of anxiety SJ experienced whilst thinking about his primary belief. He was asked to suggest another adjective that best described how he felt whilst thinking about his beliefs; this was monitored using the PQ method (Sharp *et al*., 1996). For all these measures a higher score is indicative of greater symptom severity. The conviction measure was concerned with how he was feeling at the time of testing, but the measures of preoccupation, anxiety and other affective dimensions referred to the level of symptom intensity experienced during the preceding week.

Depressive symptomatology was assessed using the short 13-item Beck Depression Inventory (Beck and Beamesderfer, 1974). The Maudsley Assessment of Delusions Schedule (MADS; Wessely *et al*., 1993) was administered at each session. This is a standardised interview designed to assess various phenomenological aspects of abnormal beliefs (e.g., conviction, preoccupation, systematisation), the associated affect, the reasons given by the subject for possessing those beliefs, the behaviour that has resulted and the insight the patient might have as to the problem (Taylor *et al*., 1994).

At the beginning of the present study SJ's primary delusional belief was identified and this became the focus for the MADS on each administration. The original version of the MADS measures delusional characteristics within a time period of a month prior to the interview. A modified version of the MADS (mMADS) was also used in this study, assessing change over a time frame of the week prior to interview (Sharp *et al*., 1996).

Three independent assessments of delusional phenomenology were completed by a psychiatrist (CF) who was blind to within-session ratings between SJ and HS. Assessments were made prior to Session 1, between Sessions 23 and 24, and after Session 29. The measures completed were the same as those completed sessionally by HS.

*Design*

SJ was assessed on 29 occasions over a period of 48 weeks, while his neuroleptic medication was gradually reduced. He was assessed on four occasions during a baseline period prior to the first reduction in dosage (Sessions 1–4) when he was on 300 mg haloperidol IM fortnightly. Medication was then reduced to 200 mg haloperidol IM fortnightly for a period of 8 weeks (Sessions 5–9), followed by 100 mg haloperidol IM fortnightly for another period of 8 weeks (Sessions 10–15) and finally 100 mg haloperidol IM every 3 weeks for 26 weeks (Sessions 16–29).

There are rules of thumb are regards the equivalences of doses of different neuroleptics (Healy,

1996). Intra-muscular doses are thought to be equivalent in effect to up to five times a comparable oral dose. SJ's initial regime therefore was probably equivalent to between 50 and 100 mg of haloperidol per day. Conventionally, 1 or 2 mg of haloperidol are seen as equivalent in effect to 50 mg of chlorpromazine. SJ's medication was equivalent to approximately 2·5 G of chlorpromazine per day. This is a high, but not extraordinary dose. Many subjects enrolled into cognitive therapy or compliance studies will be on doses approaching this. The doses were reduced slowly to minimise side effects due to withdrawal or the exacerbation of the underlying disorder (Gilbert *et al.*, 1995).

### *Procedure*

Outpatient sessions lasting approximately 60 min were conducted with a psychologist (HS), once a week at first and latterly every 2 weeks. SJ was told that he would have the opportunity to talk about his beliefs in detail and that various assessments would be completed in order to monitor how he was feeling whilst his medication was being reduced. During the sessions he was encouraged to discuss the genesis of his belief system in fine detail. Evidence was collected concerning past and present phenomena that had served to establish the belief and maintain it through time. The aim of these sessions was to learn more about the belief system, but no attempt was made to challenge the validity of these beliefs. Percentage conviction ratings and all personal questionnaires (PQ conviction, preoccupation, affect consequent upon the belief) were completed at the end of every session. The original version of the MADS was administered at the end of the first session to collect information about the month prior to that session; the mMADS was employed at the end of all subsequent sessions. The BDI was administered at the end of sessions 1, 12, 16, 20, 24 and 29. The interviews were recorded and transcripts made from which the quotes cited below are taken.

## RESULTS

At the first independent assessment prior to SJ's first session with HS, he reported having absolute conviction in his main belief that he was the illegitimate son of the Queen and was being persecuted by CTP and rated his conviction as 100 per cent certain. The independent assessor rated his preoccupation level at the maximum level — 'can hardly discuss anything but his delusions'.

During Session 1, SJ chose the adjective 'despairing' to describe how he felt whilst thinking about his beliefs. SJ's conviction, preoccupation, anxiety and despair PQ ratings throughout the period of medication reduction are displayed in Figure 1.

It is clear that the level of conviction with which his beliefs were held was unwavering, remaining at the 'absolutely sure' level throughout. Similarly, percentage conviction ratings remained at the 100 per cent sure level throughout. SJ's levels of anxiety and despair and general progress, however, did change and will now be outlined separately for each stage of medication reduction.

### *Baseline — Sessions 1–4 (300 mg haloperidol IM fortnightly)*

During baseline Session 1, SJ described how he hardly ever left his bedsit. He said he only left his room to shop for food. He reported only having been into the town centre (10 min walk away) once during the previous year. He said he didn't mix with any other people, only seeing his landlady or another tenant occasionally. He was visited by his community psychiatric nurse (CPN) who administered his depot medication fortnightly. He didn't talk to anyone about his beliefs. He reported extreme despair and anxiety whilst thinking about his beliefs, which he thought about all the time and with 100 per cent conviction. His BDI score was 19.

In Session 2 he described how he spent a great deal of the day in his armchair not doing anything. He said he actually didn't ever feel lonely as there was so much telepathy going on. During this session he outlined his main complaints as: frequent attacks, three times a week or more from his persecutor Mr Waverley, a constant 'clappering' also from Mr Waverley, a wish to have the remaining third of his brain re-connected and a wish to have the wires holding his head on removed because he felt he didn't need them anymore.

During Sessions 3 and 4 he described a lack of interest in life, a general malaise and a feeling of being 'numb in the brain for spontaneous conversation'. He described how at the beginning of an attack he would feel a sense of foreboding and how the fragments of Mr Waverley's conversation, which was normally at a constant whispering level, would become very loud. Mr Waverley

 

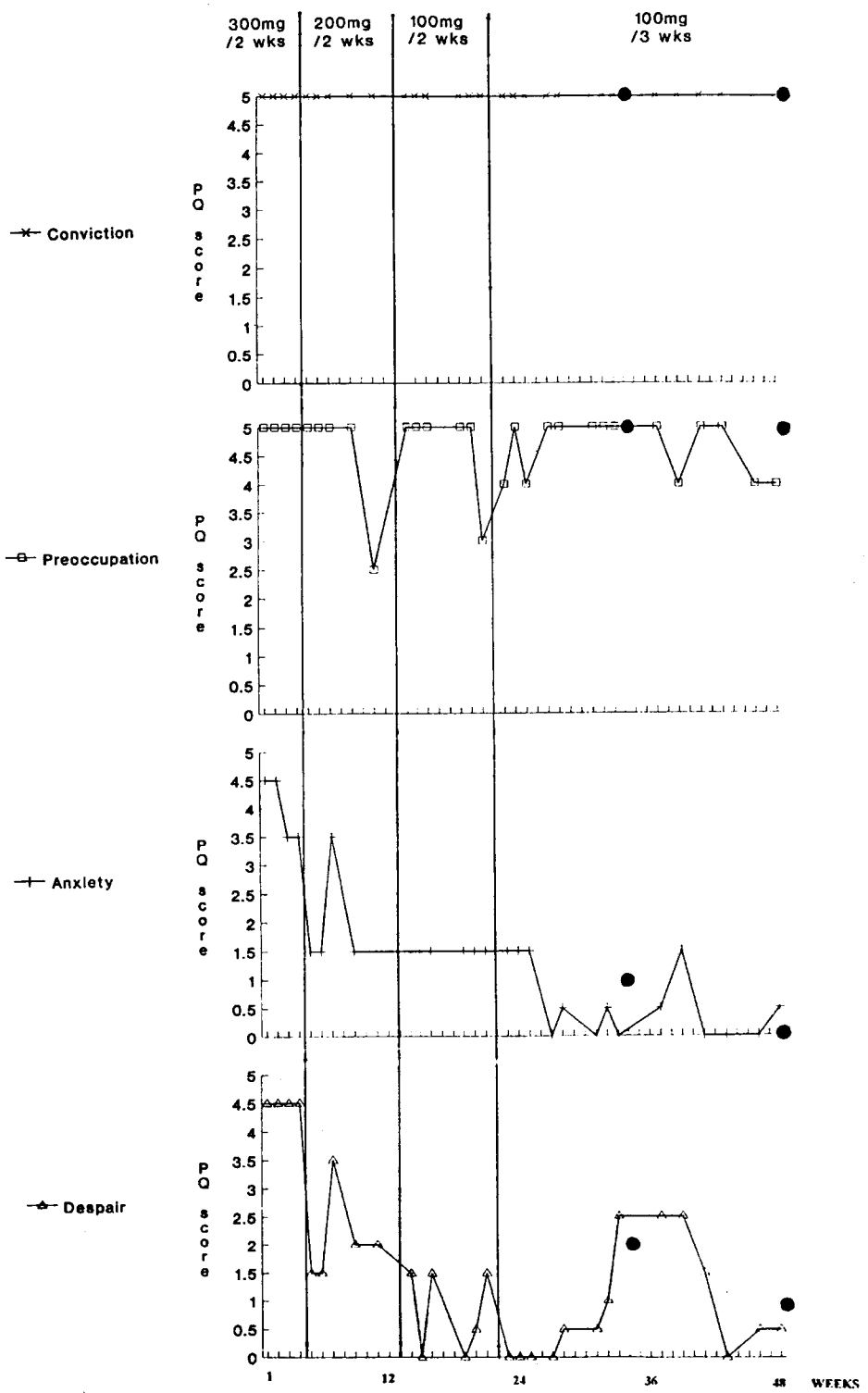


Figure 1. Changes in conviction, preoccupation, anxiety and depression in SJ with dosage reduction over 48 weeks

 

would give constant orders to do things in a certain ritualistic fashion, which SJ did in order to ward off the full force of an attack, but which he said didn't really work. During these attacks, which could last for hours, he was unable to watch television or to hold a conversation.

*200 mg haloperidol IM fortnightly*

SJ had been given leaflets on neuroleptics and their side effects by his psychiatrist (DH — see Healy, 1996). He identified with the fact that he felt as if he was moving in slow motion and said his friend thought he 'walked funny' too. He said 'I feel really stiff — my legs are really stiff. I don't get much exercise actually. I'm inclined to stay in the flat all the time. I don't want to go anywhere and I've no interest in life'.

By Session 6, he said he had had one attack a week for the last two weeks (compared with 2–3 per week before) and these had not been as bad as usual. He said 'In general things lately are getting better — during the past week or so — the attack on Sunday wasn't as bad as it normally is.' When asked whether he felt the medication had had any effect on him he said 'I don't think it works at all to be honest'. Between Sessions 5 and 9, SJ reported complete conviction in his beliefs and on four out of the five occasions reported thinking about his beliefs absolutely all the time. Of most note during this phase of the study was that the level of despair and anxiety SJ reported feeling during the week whilst thinking about his beliefs dropped markedly (see Figure 1). At four of the five sessions in this phase he reported being only 'slightly anxious' and only 'slightly' or 'fairly' despairing — contrasting markedly with his previous ratings of affect during baseline assessment. During Session 7 he talked of thoughts of suicide due to despair at having suffered 'this lot' for 12 years.

*100 mg haloperidol IM fortnightly*

By Session 10, SJ reported more positive feelings in general. He said 'I feel more capable of doing things. I want to do more things, if you see what I mean. I'm not sat in my chair all day. Not so many months ago I was complaining that I didn't feel like doing anything, even doing my dinner was a major task. I thought that was me being lazy, but now I'm sure that was a side-effect of the drugs'. He reported only having had one attack in the past three weeks. SJ said that the telepathy had all gone very quiet. 'Nobody's saying much'. He reported frequently asking them by telepathy 'what's going on? Why are you so quiet?'. A new voice came on the scene at this point, called Lord Horr Horr, whom he said defended him from Mr Waverley's attacks. At Session 11, SJ reported that all was still very quiet. He put it down to the protective effects of Lord Horr Horr being around, who only spoke when he was needed to protect SJ from Mr Waverley. He said he had been asking 'Where are you? Are you there?' to see if the voices would answer. He felt embarrassed by the fact that he had begun talking out loud to himself during the day. SJ was amazed at how quiet things had been over the past few weeks. He reported having greater interest in life and could see some sort of future for himself. He had begun going out with a couple of friends to the pub. His remaining complaint was the 'clappering'. He said it dampened his spirits. When asked if it made him feel suicidal he said 'no, not at all, not like it used to do, not for some weeks'. He also reported that he did not engage in the ritualistic behaviours any more, as attacks were rare and if one came on he refused to do them anyway. He said he had started to buy some new clothes and was thinking of giving up smoking. He said 'I'm starting to make plans for the future, I'm planning weeks ahead now, whereas one time I would take every day as it comes you know. No plans, no hopes, no thoughts, no nothing'.

He was still sure that, although things were very quiet, the CTP were still there He described communication by telepathy 'They can pick up your thoughts by telepathy, they can pick up anything that passes into my brain, absolutely anything, dreams, thoughts, visions ... They can feel me scratching, they can feel me itch as my brain picks it up, everything, they don't miss a trick'. When talking about his persecutors he said 'they spread gossip and rumours about me. I don't know what the gossip is just lately, Mr Waverley is not telling me, he's gone very quiet'. At Session 13 he reported a very mild attack in the previous week 'a skirmish that was over in half an hour'. He no longer got the urge to perform rituals during an attack and no longer felt suicidal, as the attacks were infrequent and mild.

During this phase of the study SJ reported maximum conviction and absolute preoccupation with his beliefs. However, he consistently reported feeling only slightly anxious whilst thinking about his beliefs in general. His rating of despair consequent upon his beliefs oscillated between

 

feeling slightly despairing and feeling no despair at all. At Session 12 his BDI score was 4.

*100 mg haloperidol IM every three weeks*

At Session 16, SJ reported one mild attack and said it was not like the old ones and that things were still getting better. He reported that Mr Waverley had now become very quiet like the rest of the voices on telepathy. He said it was giving him a chance to live a normal life rather than just sit in a chair all day listening to them. SJ was still going out to the pub with friends and going to a local night club at weekends. At Session 17, he reported that Mr Waverley had been very quietly whispering to him during the week. He no longer had stiffness in his arms, but still felt stiffness in his legs. SJ talked about how he'd like to start regular exercise like jogging on the promenade. He reported that it was just the remaining 'clappering' that bothered him. At Session 18 he reported that he went ten pin bowling with three friends at the weekend for the first time ever. He enjoyed it, but had suddenly come over all sweaty making his ball slip out of his fingers. He did not attribute this to anxiety, but rather thought Mr Waverley had given him the sweats as a punishment for going out and enjoying himself. He reported feeling a bit edgy for couple of days during the previous week, but he said he wasn't bothered by it. He complained about the clappering during the session and said he was a lot more jolly and a lot more relaxed when the 'clappering' wasn't so heavy.

By Session 21 he reported things had gone so quiet he'd even stopped talking about the telepathy to his best friend. He spontaneously reported that his memory was improving. He had been listening to the radio quite a bit recently and had found he could remember the names of recording artists and songs. At Session 23 he reported that he thought the attacks were things of the past and he couldn't remember when he'd last spoken telepathically. He said he found it annoying that they were not speaking to him. He felt he was being ignored. He reported feeling quite low during the week. He said he was quite used to getting out of the house more these days and had had no attacks at all which 'is nice', but said he was becoming a bit complacent about that. He felt that the novelty of not having them had worn off and he now wanted more things to improve in his life. He said he wanted to get the circuit out of his bowels for a start. At Session 26 he reported improved sleep. He was not waking at 4 am in the morning. He was getting about 8 hours sleep and waking at 8 am. He reported that the vivid day-dreaming, 'dreams and visions', had stopped, but he remained preoccupied with the injustice of having suffered for many years. He said he wanted his life back and felt that this would be achieved if the telepathy was cut off. At Session 26 he reported that the constant 'clappering' had lifted for a couple of days and it made a great difference. He reported that he was hearing only very quiet voices on telepathy which were not intrusive and did not bother him. At Session 29 he reported one episode of 'brain scrunching clappering' (level 10) after having seen the psychiatrist in the outpatient clinic, but that for the rest of the week it had averaged only 8 out of 10. At this last session, SJ said that he thought things had improved enormously for him over the past 9 months. He attributed part of 'the success' to Mr Waverley leaving him alone and part of it to the reduction in medication as he felt 'dosed up to the eyeballs before'. 'Clappering' remained his major complaint.

Between Sessions 16 and 29, SJ's conviction in his beliefs was absolute. His preoccupation level was most often at the maximum level, thinking about his beliefs more than once every hour, although on five occasions he rated his conviction at a slightly lower level, thinking about his beliefs more than four times a day, but less than once an hour. His reported anxiety whilst thinking about his beliefs between sessions was most consistently at the level of only 'very slightly anxious' or below throughout this period. For Sessions 16–21 inclusive he reported no despair or only very slight despair during the week whilst thinking about his beliefs.

His ratings for despair rose to the level of fairly despairing for three sessions from Session 23. This coincided with reports that he had begun to focus on other aspects of his life that he was unhappy with as targets for improvement. The ratings for despair, however, improved again for the last four sessions. SJ's BDI scores were 6, 6, 9, 3 and 4 at Sessions 16, 21, 24, 28, and 29 respectively.

SJ's independent assessments for conviction, preoccupation, anxiety and despair are displayed in Figure 1 and were on both occasions, between Sessions 23 and 24 and after Session 29, broadly in line with his within session ratings.

In the year following this study, SJ's medication was halted completely for a period of 6 months. It was subsequently re-instated at his request, using a

 

dose of haloperidol 25 mg I/M two-weekly. Apart from a week when he was in transition between apartments, he has not been in hospital at any time during the five years since dose reduction was first undertaken.

## DISCUSSION

The case is described of a 40 year old man with delusions and hallucinations, who at the start of this study was taking doses of neuroleptic medication greatly in excess of those that have been demonstrated to be optimally effective. Over 48 weeks, using PQ methods and detailed interviewing, his progress was charted as the medication was reduced to more acceptable levels. Across this change, his delusional beliefs remained unchanged, but there were substantial reductions in auditory hallucinations, as well as in hopelessness and anxiety. The case would seem to have implications for concepts of therapy in the psychoses and for the methodology of therapy studies. It illustrates possible benefits of using PQ or other self-assessment methods as a means of calibrating therapy and perhaps enhancing compliance.

The target features for neuroleptic medication across diagnostic categories are tension and agitation (Baldessarini, 1980). It can plausibly be proposed that tension reduction of this kind is an antipsychotic principle. Taking this view, one would expect that in a proportion of cases, a non-specific reduction of tension and agitation will be all that is needed to bring about a resolution of the disorder, whereas in others cognitive, behavioural or other pharmacological or non-pharmacological strategies will be needed to supplement the effects of tension reduction.

A belief in the specificity of neuroleptics for psychotic disorders has de facto had two consequences. One has been a neglect of non-neuroleptic therapeutic principles. The other has been an all too common increase in the doses of neuroleptics in the face of clinical non-response with little effort to determine whether drug treatment has produced tension reduction or not. The persistence of delusional beliefs (rather than any problematic actions) in this case, for instance, appeared to be the factor that led to an inappropriate escalation of dose. It is quite conceivable that in some instances the individual might be much less agitated, but display little or no change in their delusions or hallucinations, in which case increases in the dose of neuroleptics becomes increasingly likely to produce side-effects rather than further benefits. These side-effects in turn may feed into the delusional belief system, perversely maintaining it rather than helping to remedy it.

The problem for studies of therapies other than neuroleptics is that in some quarters it would be seen as unethical not to give concurrent neuroleptic medication in the course of such studies. In centres prepared to consider withholding neuroleptics, there is the problem of accounting for either beneficial, as seen in this study, or adverse changes that might occur on discontinuation (Tranter and Healy, 1998). In terms of future studies, this case suggests that preference for enrolment into cognitive or other non-pharmacological studies should be given to individuals whose medication can be held at constant levels throughout the course of the study and that ideally medication should be held at doses not much in excess of the equivalent of haloperidol 5 mg/day.

The case also opens up the possibility of monitoring side-effects as a therapeutic principle. Whether using PQ methods or other self-assessment procedures, it would seem possible to make available to the patient a record of their perceptions of well-being on various medication regimes, which could be used to challenge interpretations being made as to the origins of abnormal experience or to confront medical staff with evidence that might usefully guide their prescribing. A simpler, more user friendly method than the PQ might be of great benefit in this regard. Such methods are at present the focus of a study aimed at enhancing compliance, which will hopefully report in due course.

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