

# THE USE OF PSYCHOTROPIC DRUG THERAPY IN BORDERLINE PERSONALITY DISORDER: A CASE REPORT

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## SUMMARY

It is estimated that around 75% of patients with Borderline Personality Disorder (BPD) are prescribed psychotropic medication during their treatment course, although this is not recommended as first line therapy. In the UK, there are no guidelines to advise which drug treatments to use in BPD, however, numerous, but mostly small scale studies, show evidence that different medications target specific core symptoms. We report a case of a 25 year old woman with BPD, who has received treatment with five different psychotropic medications. We go on to assess not only the efficacy of these treatments in this individual case, but also whether the use of these treatments is in line with best evidence according to currently available research.

**Key words:** Borderline Personality Disorder (BPD) - psychotropic medication - core symptoms - emotional instability - low mood - anger - Cognitive Behavioural Therapy (CBT)

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## INTRODUCTION

Although usually considered as second-line after psychotherapy, psychotropic medications are often used in the treatment of Borderline Personality Disorder (BPD). Tyrer et al. reported that over 75% of patients with BPD are subject to polypharmacy (Tyrer 2004). However there is no consensus about a single best drug therapy in BPD. Rather, most research suggests that drug treatments should be targeted towards specific symptoms. Thus, several studies have reviewed the various psychotropic medications and the symptoms they best target. Yet, there are still no clear guidelines concerning the medications that should be considered in BPD. While the American Psychiatric Association (APA) did issue some practice guidelines for the treatment of patients with BPD, these strongly emphasise the need for clinical judgement in individual cases due to the lack of high level evidence (i.e. randomised-control trials) (APA 2001).

With this in mind, we report the case of a 25 year old female (patient X) with BPD who has had trials of a number of psychotropic medications. We review both whether the patient found the medications effective and whether current available evidence supports the use of these medications in BPD.

## CASE PRESENTATION

Patient X is a 25 year old woman with an established diagnosis of BPD. She first presented to psychiatric services in 2008 when she was 18 years old. Since this time she has had two informal admissions to the acute psychiatric ward and on both occasions her key symptoms were of emotional instability, subjective feelings of low mood, suicidal thoughts, anxiety and outbursts of anger. In addition to inpatient management,

patient X has had regular input from community mental health services, specifically the Short-term Intervention Team (SIT), which manages patients with mood and personality problems who are unlikely to require follow-up for more than about two years. As detailed in the time-line below, Patient X has received treatment with five different psychotropic medications. The time-line provides a chronological explanation of Patient X's clinical presentation as well as the rationale behind the various trials of pharmacological therapies.

### Time period: 2008-2011 (age 18-21)

#### Presentation

Patient X was first referred to Outpatient Psychiatric services in 2008 following the death of a friend. At this time, the impression was of an adjustment reaction (brief depressive episode) and she was discharged back to the care of her General Practitioner (GP). In 2011, she re-presented to her GP with symptoms of low mood in the context of the recent birth of her son and also the death of two grandparents. The GP issued a prescription for an SSRI and also referred her to SIT for further assessment.

#### Medications trialled

The GP started Citalopram 20mg OD, but switched the prescription to Mirtazapine 15mg after Patient X reported a subjective feeling of confusion when the dose of Citalopram was increased from 20mg to 30mg. SIT advised the addition of Olanzapine 5mg after Patient X reported 'paranoid' thoughts and also ongoing feelings of low mood and anxiety.

#### Outcome

Patient X reported a significant improvement in her symptoms over the next 6 months following the addition of Olanzapine.

## **Time period: 2012-2013 (age 22-23)**

### **Presentation**

Given the improvement in symptoms, Patient X was discharged back to the care of her GP with advice that Cognitive Behavioural Therapy (CBT) could be helpful. However, she was later re-referred to SIT with symptoms of low mood, suicidal ideation and outbursts of anger. There had been poor compliance with psychological therapies and also non-adherence with prescribed medications.

### **Medications trialled**

Initially Mirtazapine and Olanzapine were re-titrated to the previous doses. However, both medications were later discontinued – the Mirtazapine because it was too sedating and the Olanzapine because the patient no longer felt it was beneficial in terms of symptom control. Venlafaxine XL was trialled instead at 75mg, increased to 150mg after two weeks, but was also stopped due to reported side effects of jaw-stiffness and clenching. Finally, Quetiapine was commenced and titrated up to 300mg at night.

### **Outcome**

The titration of Quetiapine was well-tolerated. Once optimised on Quetiapine Patient X was again discharged back to the GP with advice to attend psychotherapy sessions.

## **Time period: April-November 2014 (age 24)**

### **Presentation**

Following discharge from SIT, Patient X unfortunately did not engage with psychological treatments. In July 2014, she attended Accident and Emergency (A&E) reporting worsening suicidal ideation and was subsequently referred for monitoring by the Home Treatment Team (HTT).

### **Medications trialled**

The only change in medication was that Promethazine was added on an as required basis to help control episodes of anxiety or increased emotionalism.

### **Outcome**

Following a period of regular monitoring by HTT, the acute crisis was felt to be over and she was discharged back to her GP. Her discharge medications were Quetiapine 300mg once nightly and Promethazine (max 100mg in 24 hours) as required.

## **Time period: November 2014-January 2015 (age 24)**

### **Presentation**

Following discharge from HTT, Patient X's symptoms further deteriorated. She again presented to A&E, triggering her first inpatient admission in November 2014. Her presenting symptoms were of subjective low mood with suicidal ideation and emotional

instability. She admitted to intermittent adherence with medications; she tended to stop taking medications whenever she felt her mood had improved.

### **Medications trialled**

Quetiapine was re-titrated and increased to a total of 400mg daily (100mg in the morning and 300mg at night). During re-titration, she reported palpitations at doses higher than 200mg. However, ECG readings were normal and she was ultimately able to tolerate the increased dose of Quetiapine. In addition, Venlafaxine XL was again trialled. As before, she reported teeth clenching at higher doses, but was able to tolerate 75mg daily.

### **Outcome**

She was eventually discharged in January 2015 once the medication doses had been adjusted to minimise side effects while achieving improvements in her symptoms. Objectively, she was consistently euthymic throughout admission. She remained in hospital for about 8 weeks whilst medication changes were made and also to allow her to begin attendance at a day activity centre as well as ensuring enough support was in place to enable her to look after her son on discharge.

## **Time period: January 2015-March 2015 (age 24-25)**

### **Presentation**

Soon after discharge, there was a further admission for one week after Patient X reported continued low mood and feeling "unable to cope."

### **Medications trialled**

The Quetiapine was combined to form single daily dose – i.e. 400mg at night – but no other changes to medication were made.

### **Outcome**

The admission appeared to contain the acute crisis. It was felt that Patient X could benefit from a better daily structure, so she was referred to the Day Treatment Service, which provides various activities groups including group psychotherapy. However, after a few months she stopped attending these sessions. In a follow up clinic in March 2015, she reported much improvement in her mood and was discharged from SIT to her GP.

## **DISCUSSION**

The case presentation details the treatment of a 25 year-old woman with BPD over a period of seven years. As is common for patients with BPD, a number of psychotropic medications were trialled alongside psychotherapy. But were these medications the "right" choices, at least according to the literature? Table 1 provides a summary of current available evidence for the use of psychotropic medications in BPD.

**Table 1.** Evidence for the use of psychotropic medications in BPD (Tyrer 2004, APA 2001, Rinne 2002, Lieb 2009, Ingenhoven 2010, Mercer 2009, Van den Eynde 2008, Perrella 2007)

Drug class	Effective	Ineffective/reasons to avoid
Typical anti-psychotics	<ul style="list-style-type: none"> <li>▪ Haloperidol for irritability (1)</li> <li>▪ Flupentixol for self-harm (1)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Higher rates of side effects and non-compliance than atypicals (1)</li> </ul>
Atypical anti-psychotics	<ul style="list-style-type: none"> <li>▪ Better compliance than typical anti-psychotics (1)</li> <li>▪ Aripiprazole and Olanzapine are the most effective (4)</li> <li>▪ Moderate effect on anger, especially Aripiprazole (6)</li> <li>▪ Quetiapine may be effective for impulsivity, affective symptoms (7) ncluding symptoms of low mood and aggression (8)</li> </ul>	<ul style="list-style-type: none"> <li>▪ No effect on depressive symptoms (6)</li> </ul>
SSRIs	<ul style="list-style-type: none"> <li>▪ Effective for aggression, impulsivity and anger (1, 2)</li> </ul>	<ul style="list-style-type: none"> <li>▪ SSRIs lack high levels of evidence (4)</li> </ul>
SNRIs		<ul style="list-style-type: none"> <li>▪ No evidence for Venlafaxine (1)</li> </ul>
‘Anti-depressants’	<ul style="list-style-type: none"> <li>▪ Moderate effect on anger (6)</li> </ul>	<ul style="list-style-type: none"> <li>▪ No effect on low mood or impulsiveness (5)</li> <li>▪ Low effect for depression(6)</li> </ul>
Mood Stabilisers	<ul style="list-style-type: none"> <li>▪ Most effective - Topiramate, Lamotrigine, Valproate (4)</li> <li>▪ Large effect on impulsivity, anger and anxiety; moderate effect on low mood (2, 5)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Lithium and carbamazepine ineffective (1)</li> </ul>
Benzodiazepines		<ul style="list-style-type: none"> <li>▪ High level of dependence, so discouraged (1)</li> </ul>

For Patient X, the core symptoms were of low mood, suicidal thoughts, anger outbursts and emotional instability. Although suicidal ideation was noted to increase at times of crisis, self-harming behaviour or actual physical aggression was not typical for Patient X. Putting these symptoms in the context of the evidence, a number of studies have shown that anti-depressants are more effective in reducing anger symptoms than at targeting low mood (Ingenhoven 2010). While some studies looking specifically at SSRIs have demonstrated efficacy against symptoms of anger, aggressiveness, and impulsivity (Tyrer 2004, APA 2001, Rinne 2002), a Cochrane systematic review reported limited evidence for the use of SSRIs in BPD (Lieb 2009). At least according to Tyrer et al, there is no evidence for the use of Venlafaxine in BPD (Tyrer 2004).

According to this Cochrane review, atypical anti-psychotics such as Olanzapine were the most effective drug treatment in BPD, although were mostly trialled in small-scale studies (Lieb 2009). A meta-analysis by Mercer et al. (Mercer 2009) further supported the role of anti-psychotics, Aripiprazole in particular, against anger symptoms in BPD. In general, while typical anti-psychotics may be useful against irritability, atypical antipsychotics have better efficacy and are better tolerated (Tyrer 2004). Mercer et al. found no evidence for the use of anti-psychotics in treating low mood (Mercer 2009).

A further finding of the Cochrane review was that the most effective mood stabilisers in BPD are Topiramate, Lamotrigine and Valproate (Lieb 2009) (4). Mood

stabilisers tend to be effective for anger, impulsive behaviour and anxiety, but have a lesser, “moderate” effect for symptoms of low mood (Ingenhoven 2010).

In a study specifically investigating the efficacy of Quetiapine for affective symptoms and impulsivity in BPD, Van den Eynde et al. demonstrated an overall benefit of Quetiapine (at doses of 100-800mg), where results were corrected for age, sex, anti-depressant use and number of weeks in psychotherapy (Van den Eynde 2008). Another study using an average dose of 540mg showed that psychometric testing scales improved over time and that Quetiapine treated symptoms of low mood and aggression (Perrella 2007).

Overall, it can be difficult to assess the efficacy of pharmacological therapies as patients with BPD, including Patient X, tend to adhere with medication intermittently. In addition, pharmacological therapies are often only one aspect of treatment and patients may also be receiving psychological interventions. Furthermore, most trials so far are small scale studies with low external validity, making it difficult to formulate clear guidelines for the use of medications in BPD (APA 2001). With this in mind, it is suggested that most psychotropic medications should be trialled for 2-4 weeks in BPD and discontinued slowly if ineffective (Tyrer 2004).

## CONCLUSION

Overall, mood stabilisers and atypical anti-psychotics appear to be the most effective treatments for

the core symptoms of BPD and studies consistently suggest drug treatment should target specific symptoms.

In the case of Patient X, the core symptoms of emotional instability, anxiety and outbursts of anger would, according to the evidence review, best be targeted by mood stabilisers, possibly at higher doses, or atypical anti-psychotics. In line with the evidence, Olanzapine and Quetiapine have been objectively the most successful medications for managing Patient X's symptoms.

In general, the core symptom of low mood seems to be the most difficult to treat in BPD. Anti-depressant treatment is unlikely to be effective and mood stabilisers and antipsychotics also have limited evidence. However, Quetiapine may specifically have use in the treatment of affective symptoms, including low mood, further reinforcing it as an appropriate choice for Patient X.

### Learning points

- Psychotropic medication is second line therapy after Psychotherapy for BPD, however, about 75% of patients with this diagnosis will have medication during their treatment
- There is no single recommended medication for BPD – treatments should be aimed at targeting specific symptoms
- Mood stabilisers and atypical anti-psychotics appear to be the most effective medications at treating core symptoms of BPD such as impulsivity, anger and low mood/affective symptoms
- Larger scale studies are required to further review the efficacy of psychotropic medication treatment in BPD

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