



Human figure drawings as a method of quantitative monitoring progress of clozapine treatment in severely confused patients

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Abstract

Background: The progress in clozapine treatment is notoriously slow and often unnoticeable to busy clinicians who may then erroneously discontinue it within two months, thus depriving the patient of the possibility to function independently outside of the hospital, in the community. We present a psychological method for quantitative monitoring of the progress (cognitive improvement) in initial stages of clozapine treatment in those patients with intractable schizophrenia who are too confused to be evaluated by other methods.

Method: The patient is instructed to draw a person at different points of time before clozapine and then repeatedly over the first weeks and months of clozapine therapy. The drawings are scored on a scale from 0 (no recognizable human figure, face, or another body part is discerned in the scribble) to 6 (human face or entire human figure is drawn without noticeable distortions and outside of unrelated scribble).

Results: The drawings are presented, those made by an initially very confused patient with intractable schizophrenia and history of numerous hospital admissions and unsuccessful attempts at treatment by novel antipsychotics other than clozapine. The scores on his drawings improved very slowly but steadily from 0 to 5 over the first 5 months of treatment, i.e., from irre recognizable scribble to recognizable persons. The score increase had its equivalent in improvement of adaptive behavior and in symptoms manifested by the patient.

Discussion and Conclusions: This method is designed for very confused patients with intractable psychosis whose very slow and too subtle treatment progress would risk to remain unnoticed by busy clinicians, especially by those who routinely discontinue clozapine within the first 2 months, erroneously assuming that no progress was achieved.

Keywords: Treatment resistant schizophrenia, clozapine, treatment progress, human drawings

1. Introduction

Patients with schizophrenia who do not improve on other novel antipsychotics usually subsequently respond well to clozapine, preferably as a monotherapy rather than polypharmacy (1). However, the improvement on clozapine proceeds notoriously slowly and is difficult to document via statistical data, due to the heterogeneity of symptoms in the individual cases. Some well-educated yet severely ill and maladjusted patients may still manage to complete tests such as the MMPI2 or MCMI3. In very rare cases, one of which we witnessed personally, some of them may even obtain perfectly normal MMPI2 scores, in great contrast to their otherwise florid psychotic symptoms and an inability to exist outside the closed psychiatric ward. In contrast, many other patients are confused to the extent of being unable to even produce a simple human drawing before their first clozapine dose and also over the first few months of their clozapine therapy. Our article presents a psychometric method for monitoring the progress over the first weeks or months of clozapine therapy in the very confused treatment resistant patients with schizophrenia. This is important because some physicians routinely discontinue clozapine after a few weeks or within 2 months, erroneously assuming that "no progress was noticed." In most cases, the patient's progress on clozapine is very slow, too subtle, and remains unnoticed by the busy clinician, with the result that the

patient may be forever withdrawn from clozapine treatment and deprived of its excellent benefits in terms of restoring more adequate adaptive functioning, independent living skills, and improving the patient's quality of life.

2. Method

Our psychometric method is based on a simplified version of the Draw a Person (DAP) test. The patient is provided with a sheet of paper and pencil and is instructed to "please draw a person, as good as you can." Successful performance on the DAP test requires intact cognitive skills of successfully reproducing the familiar three dimensional figure in a two dimensional space. Different complex scoring systems were developed for DAP (2, 3) with the emphasis on counting the number of details that increase the complexity of the drawing. These classical DAP scoring systems presume that the drawing is easily identifiable as a human. In general, the correlations of these DAP scores to standard IQ measures are only weak to modest (4), thus indicating that DAP should not be used as a quick substitute for standard IQ tests.

Our article focuses only on those patients with treatment resistant schizophrenia who appear too confused and irrational, those initially unable to produce any identifiable drawing of a person, i.e., a drawing in which neither an entire human figure nor a human face or at least their

elements could be discerned. Scientific monitoring the progress of such clozapine patients has typically been one of the most challenging tasks for a psychologist responsible for providing some quantifiable evidence of their improvement. Our scoring system for drawings produced by these patients is to make such professional task both simple and standardized. We suggest a simple scoring system, as follows.

Score = 0 when no recognizable human figure, face, or another body part is discerned in the scribble.

Score = 1 when at least one part of human face or of other sections of human body is discerned only with major difficulty, but only as a remote possibility, either within or outside of the scribble, and is extremely distorted.

Score = 2 when at least one part of human face or of other sections of human body appears somewhat possible, within or outside of the scribble.

Score = 3 when a human face or entire human figure seems somewhat more possible or identifiable, within or outside the scribble, yet with excessive distortions.

Score = 4 when a human face or entire human figure is clearly identifiable within or outside the scribble, though with some distortions (e.g., abnormal shape of face or of arms for a drawing of a human) or covered by apparently unrelated scribble.

Score = 5 when a human face or entire human figure is easily identifiable, with less severe but still easily noticeable distortions (e.g., uneven length or distorted shape of legs), and without being covered by apparently unrelated scribble. Such distortions could be accepted as “stylistic.”

Score = 6 when the human face or entire human figure are drawn without noticeable distortions and outside of any unrelated scribble.

The three patients whose drawings are reproduced in this article provided their verbal consent before discharge from hospital. They are to remain anonymous and unidentifiable. The contact with them was lost after the hospital where they were successfully treated with clozapine ceased its existence: almost all its inpatients left into the community after treatment with clozapine or other novel neuroleptics.

3. Results: clinical case examples.

The patient was a 30 year old gentleman, with history of more than 15 admissions as inpatient to psychiatric hospitals, mostly with the diagnosis of treatment resistant schizophrenia. The treatment with old and also with second generation antipsychotics (including risperidone) and even with lithium was attempted, but without success. On this admission, the patient was too confused to leave the ward for a walk in hospital hallways as he was prone to become disoriented and lost. Figures 1 to 4 show his performance while 2 to 14 days on clozapine. While producing these drawings, the patient appeared motivated, but was visibly tense, anxious, and sweating profusely when he attempted to draw. His utterances were usually incoherent, confused, delusional, and bizarre.

Figures 5 and 6 were drawn after 18 days on clozapine: in one of these, a wide-eyed human figure is barely noticeable on the left behind the chaotic scribble (see enlarged, in Figure 6a). His verbal and nonverbal behavior on the ward became slightly less bizarre.

Even more improvement was noted 28 days after clozapine was initiated, both with respect to his behavior and to his drawings, see Figure 7.

The drawings displayed in Figures 8, 9, and 10 were produced after 2, 3, and 5 months on clozapine, respectively. These drawings are more similar to those produced by idle normals while doodling.

Using our scoring system, this patient obtained a score of zero while only 2 and then 4 days on clozapine (Figures 1 and 2), then score of 1 for his drawings at 14 days on clozapine (Figures 3 and 4), the score of 2 for a possible human face with eyes and nose, covered in a scribble on the left (see Figure 5) at 18 days, and the score of 3 for a possible human (barely noticeable) with nose, eyes, mouth, arms, and legs extensively covered by scribble on the left of his second drawing at 18 days (Figure 6 and the detail in Figure 6a). He obtained the score of 4 for his drawing at 28 days (Figure 7), the score of 4 while at 2 months (Figure 8), the score of 5 while at 3 months (Figure 9), and also the score of 5 while at 5 months on clozapine (Figure 10).

The improvement in his scores had, after about 4 months, an unmistakable equivalent in the improvement in social and adaptive behavior, the style of interpersonal communication, and independent living skills. After many years of life marred by an intense psychosis, this patient was eventually able to start living independently outside of the hospital, in the community.

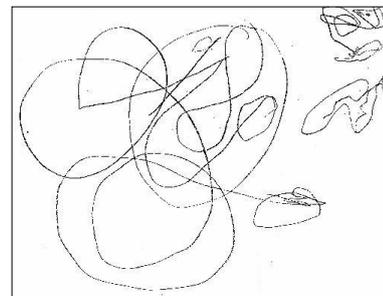


Fig 1: 2 days on clozapine

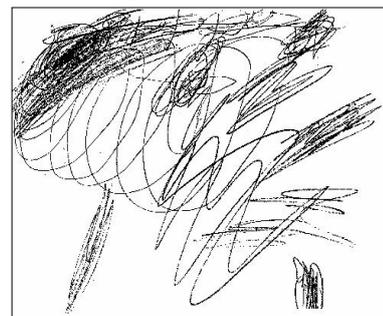


Fig 2: 4 days on clozapine

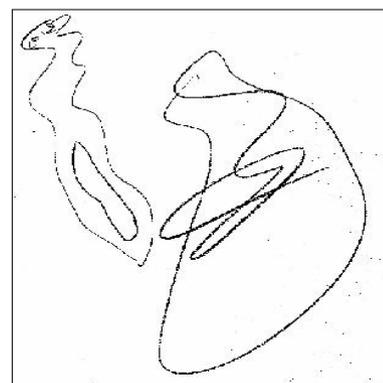


Fig 3: 14 days on clozapine



Fig 5: 14 days on clozapine



Fig 5: 18 days on clozapine

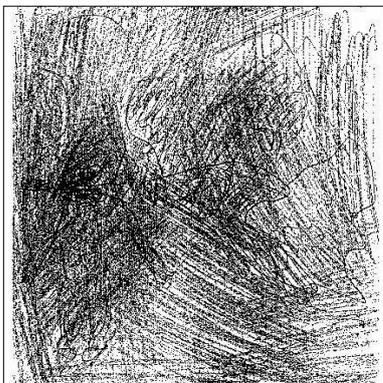


Fig 6: 18 days on clozapine



Fig 6a: detail from the left



Fig 7: 28 days on clozapine



Fig 8: 2 months on clozapine

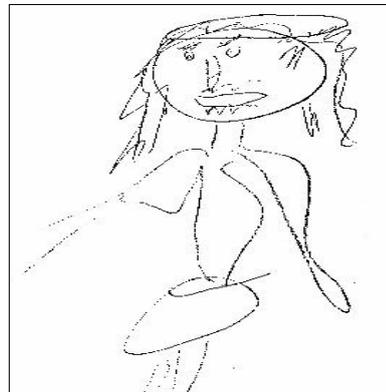


Fig 9: 3 months on clozapine

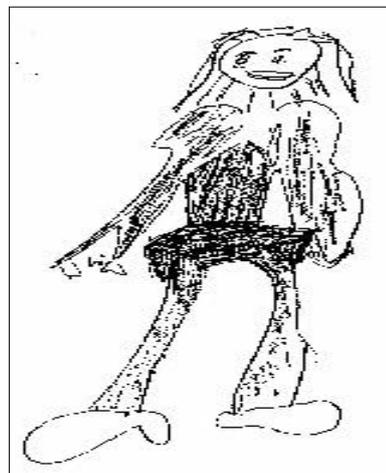


Fig 10: 5 months on clozapine

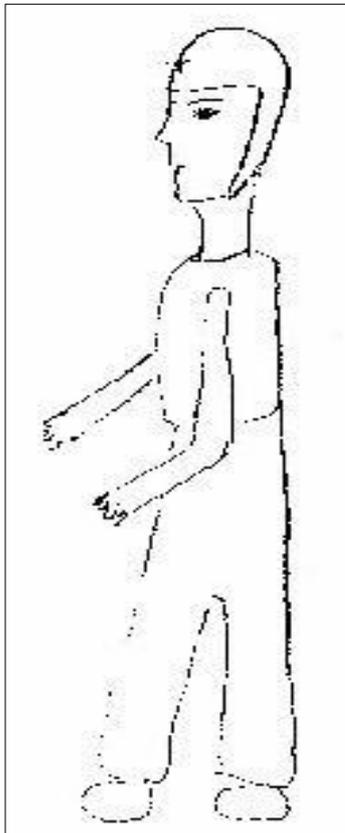


Fig 11: drawn by a female with treatment resistant schizophrenia at onset of clozapine therapy. Her comment: ‘She has handcuffs, her men take people away.’



Fig 12: drawn by a male with treatment resistant schizophrenia at onset of clozapine therapy

4. Discussion

The progress noted in these drawings (Figure 1 to 10) presumably has a parallel in the increasing clarity of the patient’s thinking, i.e., in a decrease in the level of thought disorder. Since Kraepelin’s (5) and Bleuler’s (6) pioneering work, thought disorder has been considered to be one of the key symptoms of schizophrenia. Some authors such as Whittaker (7) considered this symptom worthy of separate psychological tests.

The advantage of the method presented in our article lies in its easy use on considerably confused severely ill patients with treatment resistant schizophrenia. Unlike the Whittaker

test (7), the draw a person test can be repeatedly administered numerous times in relatively short intervals.

With respect to disadvantages, our scoring method is unsuitable for evaluating treatment progress of patients who are able, already even prior to clozapine treatment, to produce easily identifiable human drawings. This would preclude noticing an improvement.

Some intuitive clinicians, however, find even such identifiable early human drawings of psychological or psychotherapeutic interest as reflecting particular symptoms or personal characteristics of the patient, especially if the patient himself or herself comments on the drawing. For example, a paranoid female who produced Figure 11 said that the lady “has black hair and handcuffs” and that “her men take people away.” The patient’s drawing in Figure 12 may be interpreted by some clinicians as perhaps suggestive of idiosyncratic thinking style or of entrenched individualism in the style of Pablo Picasso.

5. Conclusions

The monitoring of the progress of clozapine therapy via drawings appears feasible in initially very confused patients in which an improvement over the first months would otherwise be difficult to notice by busy clinicians. This monitoring reduces the risk of the patient being erroneously labelled, even within the first 2 months, as nonresponsive to clozapine. The slow but scorable improvement in human drawings has presumably an equivalent in the improvement of cognitive clarity and a decrease in the severity of thought disorder.

6. Acknowledgment

We thank to Abe Cernovsky, BA, for his editorial assistance in this research project.

7. Reference

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