CASE REPORT

When all else fails: supervised treatment in outpatient for schizophrenia (STOPS)

Huey Jing Renee Tan

Unit Psychiatry and Mental Health, Hospital Bentong, Bentong, Pahang, Malaysia

Correspondence to
Dr Huey Jing Renee Tan,
hueyjingtang@gmail.com

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SUMMARY

This was about a case of a patient requiring admission to psychiatry ward twice a year for relapse schizophrenia due to medication non-compliance. Medication adherence was previously monitored by her husband. However, following the death of her husband, she stopped treatment. The lack of insight and poor family support further contributed to her relapse. She presented with positive and negative symptoms of schizophrenia during her relapse, neglecting her hygiene and oral intake. She was also found to have anaemia as a result of poor diet when she was in relapse. Community psychiatry services had attempted to ensure compliance with postdischarge plan but failed as patient was not present every home visits. Supervised treatment in outpatient for schizophrenia (STOPS) provided an alternative method to ensure compliance in this patient. Patient has remained in remission for 1 year since the use of STOPS.

BACKGROUND

Relapse of illness in patients with severe mental illness is common. About two-thirds of patients with first episode psychosis who has achieved complete remission will relapse within 5 years.¹ The predictors of relapse include non-adherence to medication, poor insight and poor family support.

Non-compliance to medication is a widely recognised challenging problem in the management of schizophrenia.² Some factors leading to non-compliance such as lack of insight or cognitive impairment may be unique to schizophrenia.² Treatment non-adherence in schizophrenia is associated with relapse, rehospitalisation, longer time to remission and suicidal attempts.³ Thus, non-compliance has a negative impact on the course of schizophrenia. In addition, patients who frequently relapse due to non-compliance are high-frequency users of psychiatric services, therefore increasing healthcare cost burden.

Various measures have been researched to overcome the challenge of non-adherence and recurrent relapse of mental illness. This includes the use of well-developed assertive outreach community services. Nevertheless, the effectiveness and feasibility of these measures may vary for each patient depending on the presentation and availability of support and resources. In developing countries setting such as the one in which patient was treated, only case management-based mental healthcare team available. There are insufficient man power

and lack of transportation to run an assertive outreach community services. In this setting, modification of traditional services and use of existing healthcare facility may be needed to cater for the need of individual patients.

CASE PRESENTATION

This is a 43-year-old woman who was diagnosed with schizophrenia 15 years ago. With the help of her husband in monitoring compliance to medication, she was able to stay in remission without admission to psychiatry ward for 5 years. Unfortunately, when her husband died in 2014, she defaulted treatment. Following this, she had frequent relapses and had two admissions in a year from 2014 to March 2016.

During her relapse, she was noted to be preoccupied with auditory hallucination. She was having difficulty holding meaningful conversation during interview. Her hygiene was poor as she would go on for months without shower or a change of clothes. She wore dirty clothes and had unpleasant body odour. She was also not taking her meals properly. At times, she swallowed talcum powder as a result of following commanding auditory hallucination. She was found to be wandering around town aimlessly during the day. She scored 31 on Personal and Social Performance Scale (PSP) when she was in relapse.

Previously, she relied on her husband to serve medication and to bring her for follow-up appointments. After her husband's passing, she stayed alone in her parents' house. The house was unkempt and dirty. Her father had passed away and her mother was living with her siblings in another state. There was nobody to remind her of daily medication intake. Her family were logistically too far away to monitor her compliance to medication. She had no insight of her mental illness and had defaulted medication and follow-up.

INVESTIGATIONS

Full blood count taken during admission showed low haemoglobin (8.9 g/dL) with reactive thrombocytosis ($562 \times 10^9/L$). Peripheral blood film showed red blood cells were hypochromic microcytic. Reticulocyte response was increased and there was mild anisopoikilocytosis. Full-blood picture indicated iron deficiency anaemia. The most likely cause was malnutrition as she did not have proper meals during her relapse. Patient weight 77 kg in November 2013. Her weight reduced to 60 kg in March 2016. Her body mass index reduced

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from 30.8 to 24 from 2013 to 2016. There was no history of chronic blood loss. Liver function test and renal profile was unremarkable.

TREATMENT

She was admitted to the psychiatry ward for relapse schizophrenia. She showed significant improvement in psychotic symptoms following initiation of olanzapine. There was no auditory hallucination after treatment. She no longer ingests powder following commanding auditory hallucination. Her speech was coherent and relevant and she was able to hold meaningful conversation. When she was on treatment, she was able to maintain good personal hygiene. She bath and changed her clothes daily. She was started on haematinics for treatment of anaemia. She was discharged from the ward when remission was achieved. Attempts were made to mobilise family support. Psychoeducation was carried out to help her family understand the need for medication. Psychoeducation conducted includes explanation of symptoms and course of schizophrenia, indication for treatment and importance of compliance to treatment for remission and relapse prevention. Nevertheless, despite understanding the importance of treatment adherence, her family was not able to partake in monitoring compliance due to logistic difficulties. Private psychiatric nursing home placement which may provide an alternative for ensuring medication adherence was not possible due to financial constraints.

Home visits by the community mental health team were attempted following her discharge from psychiatry ward. The aim of these home visits was to deliver intramuscular depot antipsychotic of fluphenazine once every 3 weeks as a strategy to maintain continuity of treatment. However, community psychiatry team failed to deliver the treatment as patient was often not at home during visits. It was discovered later that she spent most of the time in town and only returns home at night. Eventually, the patient was again in relapse and required admission.

During the readmission, she responded well with olanzapine. Nevertheless, the challenge remains to ensure the compliance of medication and maintenance of remission following discharge. It was discovered that patient finds enjoyment in coming to town daily for a walk and she agreed to stop by the psychiatry outpatient clinic daily. The psychiatry outpatient clinic is situated in town and not far from patient's home. Daily supervised medication delivery via directly observed treatment by psychiatric staff nurse in the psychiatry outpatient clinic (supervised treatment in outpatient for schizophrenia (STOPS)) was done following discharge. STOPS is a medication delivery method by medical staff in the outpatient clinic to improve compliance of medication in patients.

OUTCOME AND FOLLOW-UP

Patient had remained in remission for a year since the administration of medication via STOPS. Her level of functioning was also noticeably improved. She was able to prepare simple meals at home. Her personal hygiene was good and she was able to keep her home reasonably tidy. With improvement of social interactions, social functioning was restored. She scored 75 on PSP. She was no longer anaemic.

DISCUSSION

Relapse of psychiatry disorder accounts for frequent readmission to psychiatry ward.⁴ In a Scandinavian study on compliance in psychoses, about 60% of patients were found to fail in treatment adherence.⁵ Literature review showed that relapse is common

among patients who are single, with poor social network, with a diagnosis of psychotic disorder and have history of multiple admissions in the past.⁴ Lay *et al* indicated that homelessness or living alone were also factors that lead to increased use of psychiatric services.⁶ In addition, medication non-compliance has been consistently identified as a factor for frequent relapse.^{4 7-10} All these factors were found in this patient and significantly contributed to her recurrent need for admission. This in turn led to increased cost and burden on local psychiatric services.

Research suggests various methods in improving compliance and reducing admissions for patients with severe mental illness. This includes psychoeducation, engaging and mobilising family support and the use of community mental healthcare services.

Community-based services that provide psychiatric services at the comfort of patient's home via home visits made by community psychiatry team were introduced following deinstitutionalisation.¹¹ However, in a medium-resourced setting, such as in the hospital where this patient was treated, only standard mental healthcare team operating on case management-based services with dropout policy were available. An Australian study on the efficacy of case management did indicate that it was helpful in reducing frequency of hospitalisation for patients with serious mental illness.¹² Unfortunately, there were difficulties engaging this patient in the community psychiatry service as she was often not at home during home visits.

STOPS was started as a public health intervention for patients with schizophrenia in low and middle-income countries.^{10 13} STOPS adopt the principles used in directly observe treatment for tuberculosis.¹⁰ The original framework of STOPS includes engaging a key relative of the patient in collecting, administering and supervising medication.¹⁰ A study on STOPS published in the *British Journal of Psychiatry* involving 110 participants in Pakistan showed that treatment adherence was better in STOPS group (67.3%) compared with control group (45.5%; $p < 0.02$).¹⁴ However, in this case, in the absence of a key family member to supervise medication administration, daily supervision of medication intake via directly observed treatment was done by psychiatric staff nurses in the psychiatry outpatient clinic.

This patient resides in Pahang, Malaysia. Malaysia has a well-developed primary healthcare system which includes rural health clinics (Klinik Desa), community health clinics (Klinik Kesihatan), Clinic 1 Malaysia and mobile clinics. These clinics are easily assessable and affordable. The National Health and Morbidity Survey in Malaysia showed that 81% of the population live within 3 km of a health facility.¹⁵ Implementation of STOPS in these clinics may be feasible to address issue of medication adherence among patients living nearby these health facilities, with poor family support and are willing but unable to maintain compliance without supervision. Psychoeducational interventions without accompanying behavioural components and supportive services are not likely to be effective in improving medication adherence in schizophrenia.¹⁶ The interventions such as STOPS provide the behavioural components by encouraging the medication taking behaviour and providing supportive services to supervise the treatment. In addition, it may indirectly address issue on sedentary lifestyles which is common among psychiatry patients for those who are willing to walk to nearby healthcare facility daily for STOPS.

As with other available treatment modalities, STOPS has its sets of limitations. STOPS is not applicable for patients who are not willing to visit the healthcare facility daily. It is also difficult for patients living far away to assess these healthcare facilities by foot. In addition, primary healthcare staff are often lacking

in mental health knowledge and skills. Therefore, training and support of primary health staffs in mental health knowledge and skills from psychiatric services in tertiary centres is greatly needed for STOPS to work.

In conclusion, every patient is unique and there is no standard treatment regime that is able to fit the needs of all patients. Thus, modification of traditional psychiatric services is needed to meet the specific needs of patients.

Learning points

- ▶ Poor insight, non-compliance to medication and poor family support contribute to recurrent relapse in schizophrenia.
- ▶ Case management-based community psychiatry services often face difficulties in engaging patients who are not available during home visits.
- ▶ Supervised treatment in outpatient for schizophrenia may be considered as an option in ensuring medication adherence in schizophrenia.

Contributors I would like to confirm that the materials in this manuscript are original and that this manuscript has not been published elsewhere, accepted for publication elsewhere or under editorial review for publication elsewhere. I have personally involved in the work leading to the paper and is responsible for its content. Relevant ethical safeguards have been met in relation to the confidentiality and consent of the patient involved in case report.

Competing interests None declared.

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