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Intramuscular Clozapine in the acute general hospital: Experiences from a Liaison Psychiatry team

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Background

In patients with treatment-resistant psychosis presenting to the acute general hospital with serious physical illness, it is challenging to continue clozapine treatment if they are unable or unwilling to take oral medication.

Clozapine is available in intramuscular (IM) format, though this is not commonly used in the acute hospital.

We present two clinical cases of patients with treatment-resistant psychosis admitted to the acute hospital with serious physical illnesses. IM clozapine was used effectively to alleviate their psychotic symptoms and facilitate urgent medical investigations and treatment, bringing about a significant improvement in their mental and physical health.

Case study 1

Ms A was a 50 year old black British woman with schizoaffective disorder who presented to A&E with abdominal swelling, pain and nausea. She had non-compliance with her clozapine for the past 48 hours and had delusional beliefs of being pregnant with Jehovah's child. Imaging showed lesions on her liver which were suspicious of abscesses or metastases and she required a liver biopsy for definitive diagnosis, but refused based on her delusional beliefs that it would harm the unborn baby.

Ms A refused all oral medications including clozapine, and her mental state deteriorated further on the medical ward. Her physical health also deteriorated with a rise in inflammatory markers. She became verbally aggressive, paranoid and disinhibited, showing signs of a manic relapse of her schizoaffective disorder. She was detained under section 2 of the Mental Health Act.

Clozapine was re-titrated via the IM route over 1 week to a dose of 150 mg IM daily (equivalent to her usual dose of oral clozapine of 300 mg daily). This was administered in her deltoid muscle due to morbid obesity, and initially given under physical restraint. Ms A tolerated the injection with no reported issues including blood dyscrasias.

After a few days of receiving IM clozapine there was a marked improvement in her mental state; her paranoia, hostility and aggression gradually resolved and she became more amenable to taking clozapine orally. She also began to agree to medical investigations which unfortunately showed liver metastases from metastatic pancreatic cancer.

The use of IM clozapine via a novel route (deltoid) in this case enabled investigation and diagnosis of her malignancy, and stabilisation of her mental state.
This enabled her final weeks to be spent in a calm and dignified way free from the distress of florid psychotic symptoms.

Case study 2

Mr B was a 47 year old white British gentleman with chronic treatment-resistant schizophrenia who was found unresponsive in the street by the police. He had stopped taking his clozapine for several months and was admitted to the acute psychiatric ward. He was initiated on clozapine re-titration but was physically aggressive towards staff and transferred to the psychiatric intensive care unit (PICU).

On PICU, Mr B refused his clozapine and was commenced on a zuclopenthixol depot injection. He continued to display psychotic symptoms and attempted to abscond from PICU by jumping out of a third floor window. He sustained multiple spinal fractures and was transferred to the acute general hospital and intubated. Mr B was re-titrated on clozapine via NG tube whilst intubated. However, after he was extubated he pulled out his NG tube and refused to allow it to be replaced. He was physically aggressive towards staff who tried to replace his NG tube.

Swift communication between medical and psychiatric teams allowed conversion of his 300 mg oral clozapine to 150 mg IM clozapine, avoiding any need for re-titration of the dose. There followed a rapid improvement in mental state and Mr B started to comply with medical treatments and physiotherapy. He later regained his swallowing reflex and agreed to comply with oral clozapine, and was discharged back to the care of mental health services a month later. Neutrophil and white cell counts remained within normal ranges throughout treatment and no other clozapine-related side effects were reported.

Mr B's mental state gradually improved, and he became more amenable to co-operating with medical treatment for his physical health. He eventually made a recovery from his condition and was transferred back to the psychiatric hospital.

In this case, the use of IM clozapine facilitated treatment of both his psychotic relapse and physical illness, as well as reducing risks to others from his aggressive and unpredictable behaviour in context of florid psychosis.

Conclusions

Both patients successfully received IM clozapine, allowing timely treatment of their physical health conditions. There were no adverse events and significant improvement in their mental health presentations was achieved.

From these cases, IM clozapine has been demonstrated to be a safe and effective treatment for patients with serious mental illness in the acute general hospital, though it should be considered on a case-by-case basis in view of the numerous logistical and ethical quandaries involved.