

Metabolic Syndrome in Patients Receiving Clozapine and LAI Antipsychotics: Prevalence and Associated Factors

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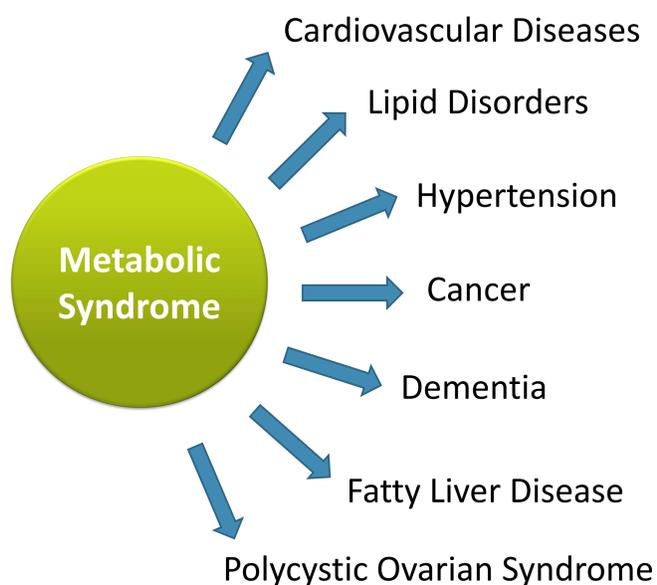
Introduction

Clozapine and Long-Acting Injectable (LAI) antipsychotics are widely prescribed for patients diagnosed with chronic and enduring mental illnesses. Despite their effectiveness in treating psychosis, there is a consensus that these agents can adversely impact on patients' metabolic profile and cause Metabolic Syndrome (MetS).

MetS is a group of abnormal clinical findings linked to an increased risk of cardiovascular disease; visceral adiposity, insulin resistance, increased blood pressure, elevated triglyceride levels and low HDL cholesterol levels are among the abnormal findings. MetS is linked to increased risk of diabetes, coronary heart disease, stroke, and premature death.

Objectives

In this study, we compare the prevalence of MetS in patients on Clozapine and LAI antipsychotics and investigate the factors associated with MetS in this population. Understanding the rate and risk factors for MetS can aid provision of services to monitor and ameliorate the impacts on patients' physical health.



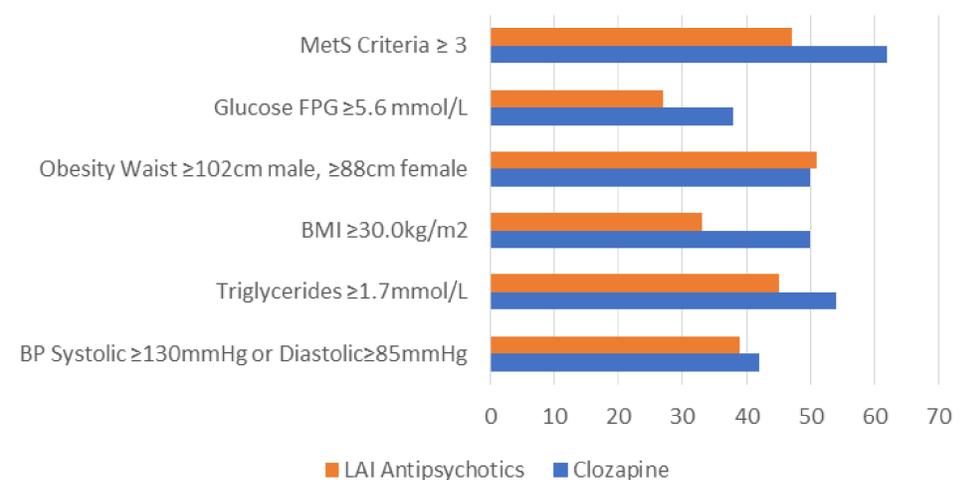
Methodology

We conducted a cross-sectional study examining health records of 307 patients receiving Clozapine and LAI antipsychotic treatment who are attending a mental health service in the North-East of Dublin, Ireland. (106 in the Clozapine group and 201 in the LAI antipsychotic group.) The study was carried out as part of a larger service development initiative and audit of physical health monitoring.

Results

We found a 60.2% and 49.5% prevalence of metabolic syndrome in the Clozapine and LAI antipsychotic groups respectively with no significant difference between the two $\chi^2(1, N=198) = 2.295, p=0.130$. The Clozapine group had significantly higher abnormal BMI, waist circumference, HDL-C and higher levels of fasting plasma glucose, triglycerides, BMI, waist circumference compared to the LAI antipsychotics group. Multiple logistic regression analysis showed significant relationships between MetS and blood pressure, BMI and fasting plasma glucose. It was also seen from bivariate analysis that Clozapine and LAI antipsychotics dose were significantly associated with MetS.

MetS Parameters



Conclusions

This study shows a high prevalence of MetS among patients with severe and enduring mental health illnesses who are receiving Clozapine and LAI antipsychotics. The results also offer important information on the factors associated with metabolic syndrome among this clinical group. Improved monitoring of factors associated with MetS may allow for early intervention and prevention.

References

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*Dublin City University (DCU) Ethics Committee approved this clinical audit as a service improvement initiative on 25th November 2020 and we got a waiver from Beaumont Hospital Ethics Committee to complete the audit on January 2021.

*Permission has been given by Clinical Director in NDMHS.

*Paper submission to Irish Medical Journal for publication.