IMH Research News

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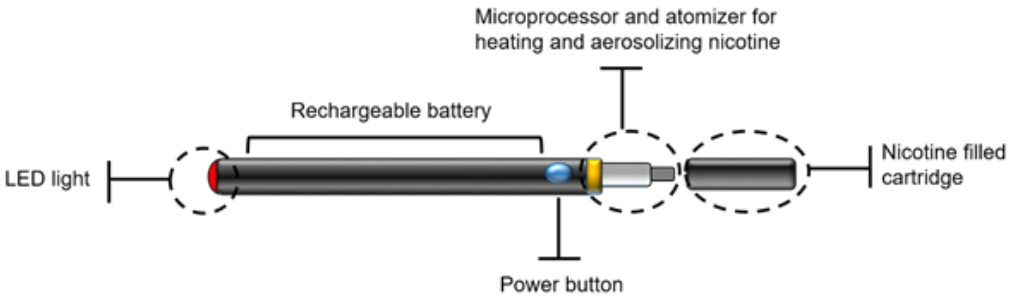
Use of Electronic nicotine delivery systems (ENDS) among those with mental illness



The prevalence of the use of ENDS (e-cigarettes, e-pipes, e-cigar) has increased globally over the past decade despite strict regulations. Smokers employ ENDS as a substitute to cigarettes in their attempt to quit smoking. The popularity of ENDS has been increasing steadily over the past decade amidst controversial health related data. People with mental illness have a higher rates of smoking than the general population (39.5% vs 12%) which adversely affect their treatment outcomes. Emerging data showed higher rates of e-cigarettes use among those with mental illness. A cross sectional study was conducted to understand prevalence, patterns and risk perception among treatment seeking mental health population.

The prevalence of ever smoking and current smoking of ENDS among smokers was 30.4% and 3.6%, respectively. The common ENDS products used were E-vaporisers followed by e-cigarettes. Around 83.9% of those who had used ENDS did it locally. The top 3 reasons for trying ENDS were curiosity (83.9%), availability of different flavours (55.4%), and as a substitute to help in quitting tobacco use (32.1%). The perception of harm was fair, with 41.8% reported that they were unsure about the addictive potential of ENDS. Nearly half (43.6%) of the patients expressed worry about the long term safety of ENDS. Majority of the non-smokers (60.2%) were aware of ENDS and nearly half (44.1%) heard it through their friends and 35.6% through social media. Nearly half (47.9%) of the non-smokers were unsure about the additive potentials and 65.8% were concerned about long term safety.

This study shed light on the ENDS milieu in Singapore, in a sample of psychiatric population. The prevalence of ENDS use among the current sample matches the international figures. Despite the stringent policy regulations in Singapore, a considerable proportion of the patients were able to procure and use ENDS locally. The perception of risk was fair but further awareness of the addictive potential and harm should be considered among populations at high risk.

Study reference
Asharani PV, Seet V, Devi F, Wang P, Kumarasan R, Subramaniam M. Electronic nicotine delivery systems: prevalence and perception of risk/ harm in individuals with mental illness. Singapore Med J. 2022 Jul 19. doi: 10.11622/smedj.2022091

Contributed by:
AshaRani PV Nair
Manager, Research Projects, Research Division
Institute of Mental Health

Is BNT162b2 mRNA COVID-19 vaccine safe for Clozapine users?

COVID-19 vaccination is recommended for individuals receiving clozapine as they have higher risk of COVID-19 infection and COVID-19-related morbidity and mortality. However, there is limited information available on risk of Covid-19 vaccinations in clozapine users. An audit was performed in the IMH in Mar 2021 to evaluate the haematological effects and adverse events in inpatients on clozapine receiving the BNT162b2 vaccination.

All institutionalised clozapine patients who received a dose of BNT162b2 mRNA vaccine were included. Three full blood count (FBC) samples were collected - within a week before the first dose then a week after the first and second dose of the vaccine. Patients were monitored up to 72 hours for emergent adverse effects.

A total of 127 and 124 patients received the first and second dose of the vaccine respectively. There were no statistically significant differences in haematological variables (see Table 1) and no cases of agranulocytosis detected for the 121 patients who received both doses of vaccine and had all three FBC done. 37 adverse events were reported in 30 individuals. Majority of the adverse events reported were mild.

Hematological Variables †	N	Pre-vaccination	1 week after 1st dose	1 week after 2nd dose	P ‡
WBC (x10³/uL)	121§	7.92±2.42	7.71±2.24	7.53±2.21	0.122
RBC (x10⁶/uL)	121§	4.54±0.48	4.52±0.50	4.46±0.51	0.826
Hemoglobin (g/dL)	121§	13.26±1.35	13.18±1.19	12.96±1.34	0.776
Platelets (x10³/uL)	121§	247.40±67.48	251.15±70.54	254.71±70.37	0.523
MPV (fL)	119¶	10.63±1.02	10.53±0.99	10.39±0.95	0.550
Neutrophils (x10³/uL)	121§	5.08±2.02	4.87±1.86	4.60±1.83	0.226
Lymphocytes (x10³/uL)	121§	1.85±0.66	1.87±0.66	1.90±0.70	0.740
Monocytes (x10³/uL)	121§	0.67±0.25	0.79±1.24	0.77±1.00	0.681
Eosinophils (x10³/uL)	121§	0.30±0.28	0.30±0.32	0.31 ±0.24	0.723
Basophils (x10³/uL)	121§	0.03±0.01	0.04±0.09	0.03±0.01	0.975

† log 10 transformation used for statistical analysis
‡ p values obtained from repeated measures ANOVA test after controlling for age, sex and total daily clozapine dose.
§ 3 out of 124 were excluded from statistical analysis due to missing data
¶ 5 out of 124 were excluded from statistical analysis due to missing data (n=3) and invalid MPV due to microcytosis (n=2)
WBC white blood cells; RBC red blood cells; MPV mean platelet volume

The **BNT162b2 mRNA vaccine appears safe for most** patients on clozapine. **Additional haematological monitoring during vaccination is likely unnecessary, unless indicated clinically. Clinicians should not discontinue clozapine when there is a transient and asymptomatic decline in WBC/ ANC above the red flag threshold.** Given the risk that COVID-19 poses to patients on clozapine therapy, our data supports the use of mRNA vaccination in those without contraindications.

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Study reference:
Lim, S., Liew, E., Leo, A., Ng, B. T., Lee, J. (2022) Haematological changes and adverse events associated with BNT162b2 mRNA COVID-19 vaccine in patients receiving clozapine — Findings from an audit. Acta Psychiatr Scand., 146(2), 179-181. https://doi.org/10.1111/acps.13443

Contributed by:
Lim Shuli
Senior Pharmacist, Department of Pharmacy
Institute of Mental Health

Author and co-authors' details
Shuli Lim[1], Emily Liew[1], Amy Leo[1], Boon Tat Ng[1], Jimmy Lee[2],[3]

Affiliations:
1. Department of Pharmacy, Institute of Mental Health, Singapore
2. Department of Psychosis, Institute of Mental Health, Singapore
3. Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore