A 6-MONTH OPEN-LABEL STUDY OF VORTIOXETINE AMONG CANCER PATIENTS WITH MAJOR DEPRESSIVE DISORDER (MDD)

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Introduction

Cancer diagnoses are associated with increased risks of comorbidity, cognitive impairment, emotional distress, and lowered quality of life for both patients and their family[1,2]. Depression is one of the most common psychiatric sequelae, affecting 15-25% of cancer patients[3]. To date, optimal treatment of depression in cancer is not yet established.

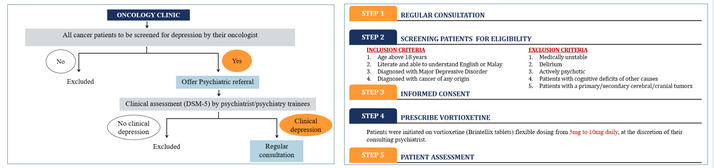
The objectives of our study were to determine the efficacy of vortioxetine on depression and cognitive function and to elucidate its potential effects on quality of life in patients with cancer of any origin.

Methods

Study Participants

The study participants were outpatients aged 18 years and above with cancer of any origin and a primary diagnosis of major depressive disorder (MDD), based on the DSM-V criteria. At baseline screening, patients were administered the Montgomery-Åsberg Depression Rating Scale (MADRS), and a score of at least 20 was required for eligibility, indicating moderate to severe depression. Patients were excluded if they demonstrated: (1) comorbid psychiatric disorders other than MDD, (2) active psychosis, (3) delirium, (4) medical instability, (5) cognitive deficits of causes other than cancer or primary/secondary cerebral/cranial tumors **(Diagram 1)**

Diagram 1: Patient recruitment flowchart



DSM-5: Diagnostic and Statistical Manual of Mental Disorders (Fifth Edition)

Assessment Timeline

Patients were assessed at baseline, weeks 2,4, 8, 12, 16, 20, and 24 with the following outcome measures Montgomery-Asberg Depression Scale (MADRS), Perceived Deficit Questionnaire- 5 (PDQ-5), The European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30), Clinical Global Impression (CGI) and the Antidepressant Side-Effect Checklist (ASEC).

Results

Patient Baseline Characteristics

- A total of 45 patients were included in the study. The average age of the participants was around 53 years, with almost two-thirds females. More than half were Chinese (57.8%), 26.7% were Malay, and 6.7% were Indian **(Table 1)**. The mean baseline MADRS total score was 29.89 ± 5.997, indicating moderate to severe depression, consistent with the mean CGI-S score of 4.39 ± 0.746. **(Table 2)**. The vortioxetine dosing range was 5-20 mg daily.

Depressive Symptoms

- Patients experienced a reduction of 18 points in total MADRS scores from 29.89 ± 5.997 at baseline to 11.59 ± 4.629 by Week 24 **(Figure 1)**
- Another key finding is the enhancement in the baseline patient-reported cognitive function scores, as measured by the PDQ-5
- Furthermore, our results are highly consistent with the REVIDA study that demonstrated the efficacy of vortioxetine in reducing depressive symptoms and enhancing cognitive function among South-East Asian patients in clinical settings[4]

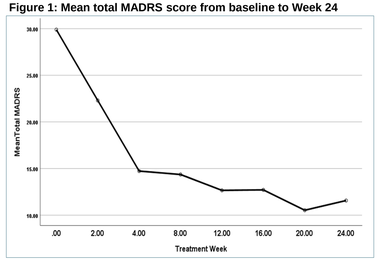
Table 1: Patient demographic characteristics

Characteristics	Patients (n=45)
Gender n (%)	
Females	28 (62.2)
Males	14 (31.1)
Age (years)	
Mean ± SD	53.78 ± 13.06
Range	29.00 – 83.00
Ethnicity n (%)	
Chinese	26 (57.8)
Malay	12 (26.7)
Indian	3 (6.7)
Others	1 (2.2)

Table 2: Patient baseline clinical characteristics

Characteristics	Patients (n=45)
Type of cancer n (%)	
Breast cancer	21 (46.7)
Colon cancer	6 (13.3)
Endocrine cancer	1 (2.2)
Leukemia	1 (2.2)
Liver cancer	2 (4.4)
Lymphoma	2 (4.4)
Ovarian cancer	1 (2.2)
Prostate cancer	3 (6.7)
Uterine cancer	2 (4.4)
Rating scale scores	
MADRS total score	29.89 ± 5.997
CGI-S score	4.39 ± 0.746

Figure 1: Mean total MADRS score from baseline to Week 24

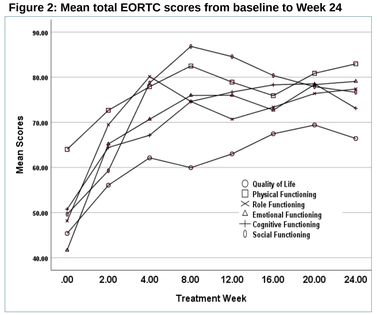


MADRS, Montgomery-Asberg Depression Scale

Quality of life

- Vortioxetine separated from placebo on the European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire **(Figure 2)**
- These results are corroborated by six short-term, placebo-controlled studies analyzed for the impact of vortioxetine on the health-related quality of life of adults with MDD[5]

Figure 2: Mean total EORTC scores from baseline to Week 24



EORTC QLQ-C30, The European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire

Safety and tolerability

- During the 24-week study period, around three-quarters of the patients reported one or more adverse events.
- Although this proportion is slightly higher than past research, the medical history of our patient cohort provides a compelling explanation for these findings[6,7].
- In addition, side effects were assessed via the ASEC scale at all time points of this study (**Table 3**). This could induce a higher adverse event reporting than in real-life clinical practice, where patients spontaneously report adverse events.

Table 3: Prevalent adverse events over the 24-week study period

Adverse Event	N (%)
Patients with TEAE	**33 (73.3%)**
Dry mouth	46.70%
Insomnia	36.40%
Somnolence	35.70%
Headache	32.30%
Constipation	27.20%
Blurred vision	25.80%
Hyperhidrosis	23.40%
Palpitations	21.90%
Feeling light-headed on standing	21.40%
Yawning	20.20%
Decreased appetite	20.00%

Conclusions

- The present study supports the growing body of evidence on the efficacy of vortioxetine, 5–20 mg/day, in the management of depression, enhancement of cognitive function, and quality of life of cancer patients with Major Depressive Disorder.
- Findings from this research suggest that vortioxetine at the earlier mentioned doses can be utilized in future clinical trials to evaluate its comparative efficacy among cancer patients with depression.

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Disclosures

The study procedures were approved by the Medical Research Ethics Committee (MREC), University of Malaya Medical Centre (UMMC) [MRECID.NO: 201972-7593], and Medical Research and Ethics Committee (MREC), Ministry of Health Malaysia [NMMR-19-2850-50323]. This study was an investigator-initiated trial with grant support from Lundbeck South-East Asia. The trial protocol was registered at ClinicalTrials.gov (NCT04253678)

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