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Supporting information

Additional Supporting Information may be found in the online version of this article at the publisher's web-site:

Table S1. Characteristics of participants with and without psychosis after DBS.

Table S2. Cases with psychosis after DBS.

Table S3. Characteristics of participants with and without delirium after DBS.

Figure S1. A: Age. This is a box and whisker chart. Patients with psychosis after DBS were significantly younger than patients with no psychosis (t[141] = 1.990, P = 0.0485). The upper and lower limits of each box indicate the third and first quartiles. The horizontal line in the box indicates the median. The cross indicates the mean. The upper whisker indicates the maximum, and the lower whisker indicates the minimum.
B: MDS-UPDRS III. This is a box and whisker chart. The MDS-UPDRS III score in the medication-off period before DBS was significantly higher in patients with postoperative psychosis than in patients with no psychosis (t[141] = −3.268, P = 0.00136).
C: Age vs. UPDRS-III. The x axis indicates age, and the y axis indicates the MDS-UPDRS III score in the medication-off period. Black circles show patients with postoperative psychosis, and white circles show patients with no psychosis. We found no significant relationship between age and the MDS-UPDRS III score.
D: LEDD. This bar graph shows the change over time in the levodopa equivalent daily dose (LEDD). LEDD was significantly reduced from baseline at 14 and 21 days after DBS (F[2,426] = 114.28, $P = 1.856 \times 10^{-40}$; post-hoc P[baseline-14days] = 3.380×10^{-26}, P[baseline-21days] = 1.559×10^{-37} and P[14days-21days] = 0.0148). The LEDD at each time point was not significantly different between psychosis and no psychosis. Error bars show the standard error.
E: Proportion of DA. This bar graph shows the change over time in the dopamine agonist (DA) ratio in total LEDD. The y axis on the left indicates [(LEDD of DA)/(total LEDD)]. The x axis indicates days after DBS. The proportion of DA in the psychosis group was significantly higher than that in the no psychosis group at 14 days after DBS (t[141] = −2.082, P = 0.0391). However, we found no significant difference before DBS (Table S1).

Figure S2. IMP-SPECT. This bar graph shows regional cerebral blood flow as assessed with ^{123}I-IMP-SPECT. The left graph indicates the left hemisphere, and the right graph indicates the right hemisphere. We divided the brain into 31 areas. The black bar represents "no psychosis", and the gray bar represents "psychosis" after DBS. The y axis on the left indicates the relative blood flow in each area. We found no significant different between psychosis and no psychosis. Error bars show the standard error.

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Trust is a key factor in the willingness of health professionals to work during the COVID-19 outbreak: Experience from the H1N1 pandemic in Japan 2009

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The future of the novel coronavirus (COVID-19) is still unclear. The outbreak emerged in Wuhan, China in December 2019 and spread to other regions in China, as well as cities in other countries. It is forecasted that outbreaks in major cities globally could be inevitable without large-scale intervention.[1] An increasing number of health professionals will encounter infected patients. The medical works in Wuhan are already facing overwhelming pressure, overwork, frustration[2] and they need timely mental health care.[3] This is identical to the H1N1 pandemic in Japan 2009.[4,5] On February 11, 2020, one quarantine officer was infected with COVID-19 in Japan. For health professionals, protection against getting infected is a priority. Additionally, it is also important to ensure that health professionals are willing to continue work, so that hospitals can keep functioning. Here, I introduce my experience from the H1N1 pandemic in Japan during 2009.

On May 16, 2009, Kobe City Medical Center General Hospital admitted the first domestically infected patient in Japan. The number of patients who were suspected as having H1N1 influenza grew to 1687 within 2 weeks. On May 27, when the mayor of Kobe city declared the emergency had subsided. The World Health Organization (WHO) declared H1N1 influenza as a pandemic on June 11, 2009. Details of this are described elsewhere.[4,5] I am a psychiatrist, but I also worked at an outpatient unit that screened for H1N1, and I was worried about being infected. However, the chief of my department led the way by personally consulting at the outpatient unit, which motivated me to join as well.

My experience led me conduct a cross-sectional survey about the willingness and hesitation to work during the H1N1 pandemic with 3635 employees at three core hospitals in Kobe city between June and July 2009.[6]

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Among the respondents, 28.4% said they were strongly motivated to work, while 14.7% said they were very hesitant to work. The most influential factors that motivated people to work were feeling that they were being protected by their country, local government, and hospital. Contrastingly, those workers that were more hesitant about working were anxious about being infected, compensation in case of being infected, and feeling isolated. However, 94.1% of respondents answered that the protection by the national and local government was weak and 79.7% answered that the protection by the hospital was weak.[6]

The results suggest that trust between organizations and workers is an important element in professionals being willing to work during a public health crisis. Additionally, physical protection against infection was seen as important. A systematic review indicated that trust encourages social interactions and cooperation among health professionals. Trust has been shown to help improve retention, motivation, performance and quality of care.[7]

One way to promote trust among organizations and health professionals is through the frequent provision of information. A medical officer in Beijing, who had experienced SARS, proposed that regular and timely provision of information was useful in alleviating anxiety to some degree.[8] Additionally, frequent communication with and encouragement to health workers from governors and employers leads to them feeling protected. If a health professional does become infected, compensation may also be another incentive to work.

It is important to provide physical protective material. However, psychological support should also be made available. Trust may also be a key element.

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Vortioxetine *vs* placebo in major depressive disorder: A systematic review and meta-analysis of double-blind, randomized, placebo-controlled, phase 3 trials in Japan

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We recently read Professor Inoue's article.[1] The authors reported that both vortioxetine 10 mg/day (VOR10) and 20 mg/day (VOR20) were superior to placebo in efficacy outcomes for Japanese patients with major depressive disorder (MDD). Based on the evidence presented, VOR was approved for MDD treatment in Japan. However, two other double-blind, randomized, placebo-controlled, phase 3 trials (DBRPCP3T) of VOR for MDD in Japan showed that VOR was not superior to placebo in efficacy outcomes.[2,3] Thus, the results of efficacy among three Japan DBRPCP3T are inconsistent (Table S1); therefore, we performed a systematic review and meta-analysis to investigate the true benefits and efficacy of VOR in Japanese patients with MDD.

We performed a systematic literature review based on the patient, intervention, comparison, and outcome (PICO) strategy:

- Participants/population: Japanese patients with MDD.
- Interventions: either VOR10 or VOR20 fixed-dose depending on the approved dose in Japan.
- Comparator/control: placebo.
- Outcomes: improvement in scores for the Montgomery–Åsberg Depression Rating Scale (MADRS; primary outcome),[4] Clinical Global Impression–Improvement (CGI-I) Scale, [5] and Sheehan Disability Scale[6]; response rate (≥50% reduction from baseline in MADRS score) and remission rate (MADRS total score ≤ 10); discontinuation due to all causes or adverse events; inefficacy; and incidence of individual adverse events.

Our analysis focused on Japanese DBRPCP3T. To identify relevant studies, four authors (T. K., K. S., M. O., and Y. M.) independently searched three electronic databases, namely Scopus, MEDLINE, and the Cochrane Library, without any language restrictions, until 6 January 2020. Furthermore, the authors performed a search in the clinical trial registries and independently assessed the identified studies based on the inclusion and exclusion criteria. In addition, the reference lists of the selected articles and reviews were searched for further relevant published and unpublished studies, including conference abstracts. Finally, these four authors independently extracted data from the selected studies.

Only full analysis set analysis (last observation carried forward that is generally considered conservative,[7] Table S2) data were used. Our primary meta-analysis compared VOR at all doses with placebo for all outcomes. The meta-analysis was performed using the Review Manager software,[8] and a random-effects model was implemented because of potential heterogeneities across the acquired studies.[7] Dichotomous outcomes were presented as risk ratios (RR) with 95% confidence intervals (CI), whereas continuous outcomes were analyzed using the mean difference (MD). When intergroup differences regarding treatment efficacy or adverse events based on RR were significant, the number needed to treat to benefit or that to harm was calculated from the risk difference. Heterogeneity was tested using the I^2 statistic, and $I^2 \geq 50\%$ was considered to indicate substantial heterogeneity.[7] We added a subgroup analysis that compared the efficacy outcomes between patient subgroups across the studies who took VOL10 and VOL20 to examine the association between