



Letter to the Editor

Overcoming treatment-resistant major depressive disorder outside of the doctor's office



To the Editor:

In the 21st century, advances in technology allow people not only to communicate easily, from the social point of view, but can also provide new methods of therapy through computer-assisted communication. Among online medical consultations, mental health is one of the most popular topics. In treatment-resistant major depressive disorder (TR-MDD) there are some conditions that could limit patients' physical ability to attend medical appointments, such as the distance to the clinic, financial difficulties or agoraphobia. To overcome these barriers, innovative approaches have been proposed through the use of the Internet. The aim of this study was to assess if Skype consultations of patients with TR-MDD with or without other co-morbid psychiatric pathologies, were as effective as conventional office consultations.

The first consultation was mandatory to be in the office. Patients were non-randomly divided in two groups: office consultation ($n = 95$) and Skype consultation ($n = 103$). The reason for the non-random distribution was due to patient preference since patients were asked to choose how they preferred to be followed-up. This choice was completely at the patients' discretion. The protocol was approved by the Institutional Review Board of Clínica Médico-Psiquiátrica da Ordem. All participants provided written informed consent. All patients were followed for 12 months and evaluated in 3–5 regular consultations. Irrespective of these consultations, a formal evaluation of the studied parameters was performed at baseline, 6 months and 12 months - HAMD17 total score (Hamilton, 1960), severity of disease, assessed using the severity subscale of the Clinical Global Impression Scale (CGI-S) (Guy, 1976), and functioning, assessed using the Global Assessment of Functioning (GAF) (Greenberg and Rosenheck, 2005). The Texas Algorithm was used for adjusting medication during the 12-month follow-up, since it has proven to be superior than treatment as usual in MDD patients (Trivedi et al., 2004). Only patients that had similar or equivalent pharmacotherapy were maintained in the study. All patients, in both groups, were facebook "friends" of the psychiatrist and all had the psychiatrist's mobile phone number. Therefore, all patients had full access to their psychiatrist at any day and any time.

Response and remission rates were based on HAMD17, with response defined as a decrease from baseline to endpoint of $\geq 50\%$ on the HAMD17 total score and remission defined as an endpoint HAMD17 total score ≤ 7 .

Participants included in the Skype group differed significantly from participants in the office consultation group regarding three psychiatric comorbidities: Generalized Anxiety Disorder (GAD) or Panic Disorder (PD) with or without agoraphobia. The number of patients with PD with agoraphobia was significantly higher in the Skype consultation group ($p < 0.001$). As for age, gender, HAMD17, CGI-S, GAF, TR-MDD alone or TR-MDD + OCD the groups did not differ significantly.

Analysis of the 3 time points – baseline, 6 and 12 months – showed that HAMD17, CGI-S and GAF scores decreased significantly on both

groups at 6 and 12 months compared to baseline, and at 12 months compared to 6 months. There were no differences between groups at any of the time points.

Eighteen patients (21.4%) on the office group and twenty-nine (34.1%) on the Skype group responded at the end of 12 months, with no differences between groups. Six patients (7.1%) on the office group and seventeen (20.0%) on the Skype group were in remission at the end of 12 months, with the Skype group showing higher rates of remission ($p = 0.023$)

The number of patients with GAD was significantly higher in the office consultation group, and on the other hand, the percentage of patients with agoraphobia was significantly higher in the Skype consultation group. For patients with GAD the change in the format of the consultations could be sufficient to provoke an anxiety crisis with the worry of getting worse from the depression. This may have been the reason why patients with GAD did not choose the Skype consultation.

Agoraphobia could be a barrier to go to the clinic, to a medical appointment with a psychiatrist. The finding that agoraphobic patients chose the Skype consultations group is of the utmost relevance, since this choice was at the patients' discretion.

Our results show that after 12 months of follow-up the two groups were similar in terms of depression symptoms (HAMD17), disease severity (CGI-S) and function (GAF), suggesting that the consultations by Skype are as efficient as the office ones. All patients improved over time: HAMD17 and CGI-S decreased significantly and GAF increased.

The result that the percentage of TR-MDD patients in remission after 12 months was higher in the Skype group deserves some considerations. First, patients in the Skype group had more consultations than patients in the office group, which could have contributed to the higher remission rates. In fact, the observed low remission rates of TR-MDD patients may be related to several factors, namely the difficulty patients have to go to an office consultation, which may be related to the pathology itself, comorbidities, being too time consuming or financial issues. Also, in our Skype consultations group appointments were often scheduled after working hours so that the patient did not have to miss work, and the respective income. Since these consultations were made from the patients' home to the psychiatrist's home, they may have contributed to the patients feeling more supported at all times (Mota Pereira, 2014). This is not possible on the office consultations since the administrative staff cannot stay beyond their working hours.

Through Skype the psychiatrist may see the true and everyday environment surrounding the patient, where they live, how they keep the house, if they have pets, how much they smoke, how they interact with the family, and can even talk to the family, if he deems it necessary. By understanding all these issues, the psychiatrist can better understand the patients' needs and treat them better. All the above-mentioned points may explain the better remission results in the Skype group.

In conclusion, our study demonstrated that the Skype application is a viable option to provide psychiatric care to individuals with TR-MDD.

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Moreover, Skype consultations were more effective than office consultations regarding remission rates.

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