Repetitive transcranial magnetic stimulation (rTMS) in major depressive episode during pregnancy

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Abstract

Sir: For women diagnosed with Reccurrent depressive disorder, pregnancy poses a major treatment challenge. Apart from antidepressants, the most commonly used biological therapeutical method is ECT (electroconvulsive therapy). We believe that similar efficacy can be achieved using rTMS as a safer option with substantially less side effects. So far, only a few case-reports reporting the use of rTMS for treatment of pregnant patients with depression were published [1].

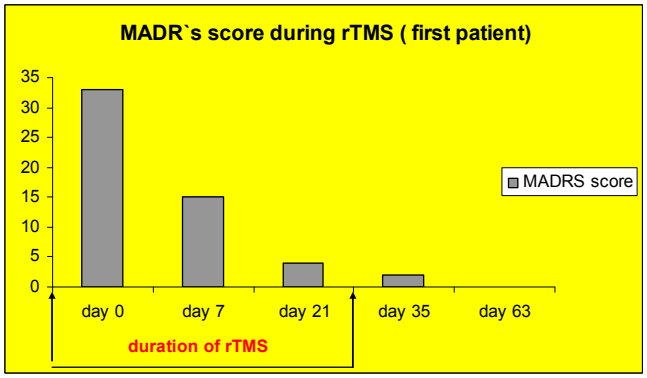
LETTER

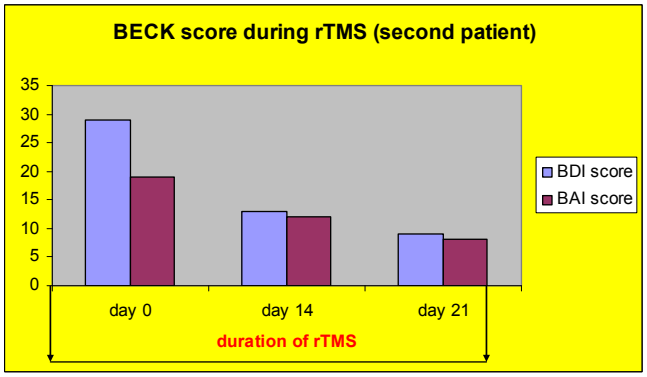
CASE REPORT:

Clinical Picture and Methods: The subjects were two pregnant females, 30 years old, with history of Reccurrent depressive disorder and current symptoms of depression requiring treatment. The first patient has been treated with escitalopram 15 mg p.d. for 4 years and venlafaxine XR 225 mg p.d. for 3 years. She started rTMS at the 16th week of pregnancy. Parameter settings [2] were: 15 sessions, 20 Hz over the left DLPFC, intensity of 100% of MT, (train 2.5 s, intertrain 30 s), 2000 pulses/session. Depressive symptoms were assessed using MADRS. The second patient started stimulation at the 31st week of pregnancy. She did not respond to the previous therapy with escitalopram 40 mg for 5 weeks with increase up to 60 mg p.d. for the following 2 weeks. She was switched to venlafaxine 225 mg p.d. at the time of rTMS initiation. Parameter settings were: 15 sessions, 1 Hz rTMS over the right DLPFC, intensity of 100% of MT (five 60 s trains with 60 sec intertrains, 300 pulses/session). The settings were adopted from the Fitzgerald's study [3]. This protocol was chosen due to the low number of magnetic pulses during rTMS. Depressive symptoms were assessed using BDI (short form) and BAI.

RESULTS:

In both patients, a significant treatment response to rTMS treatment was observed. Baseline MADRS total score of the first patient was 33. At week 1, the score was reduced by 55% and the patient achieved remission after 3 weeks of rTMS (MADRS total score was 2). The remission was sustained for the remaining duration of pregnancy. No side effects were observed during rTMS. The delivery was uncomplicated and on time, the baby was healthy, breastfed. Baseline BDI total score of the second patient was 29, BAI score 19. The BDI and BAI scores decreased by 59 % and 58%, respectively after 3 weeks of rTMS treatment. The patient continued with venlafaxine XR 225 mg p.d. for the remaining duration of pregnancy. The delivery was premature (36 week), the newborn being more irritated during the first week; however, the baby fully recovered and is considered healthy.





CONCLUSIONS:

No side or adverse effects associated with rTMS were observed. Although no general recommendations can be drawn based on our results, the case reports suggest that rTMS should be considered as an effective and safe treatment option for depression in pregnancy.

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