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## Mental Depression Drug Therapy in Presence of Ascorbic Acid: Clinical Study

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### Short commentary

Clinical prospective double blind study was carried out to investigate the effect of ascorbic acid on mental depression therapy and the possible therapeutic interaction with the pharmacotherapy of the disease. The study involves twenty two outpatients. The psychiatrist assessed diagnostic status according to diagnostic and statistical manual of mental disorders 4th edition (DSM-IV) and prescribes a suitable antidepressant drugs to the patients. Patients were assessed at baseline before medication started and after eight-week. The principal measure of the outcome was Hamilton Rating Scale for Depression (HAM-D 17-item). The mean decrease in HAM-D score from baseline was used as the main outcome measure of response of depression to treatment. The physical examination and clinical laboratory investigations including a complete urine analysis, biochemical, haematology analysis, and plasma ascorbic acid was measured, at baseline and after eight-week of receiving both ascorbic acid or placebo.

In group A, 8 patients were treated with paroxetine 20 mg, 2 patients were treated with fluoxetine 20 mg, 1 patient was treated with combination of olanzapine 10 mg and clomipramine 75 mg, 1 patient was treated with clomipramine 75 mg, and 1 patient was treated with fluvoxamine 20 mg. In group B, 5 patients were treated with paroxetine 20 mg, 1 patient was treated with combination of olanzapine 10 mg and fluoxetine 20 mg, 1 patient was treated with combination of quetiapine 200 mg and clomipramine 75mg, and 2 patients were treated with clomipramine 75 mg. Nitrazepam 5 mg was prescribed in two cases of group A and one of group B.

Ascorbic acid (500 mg) and placebo tablets were administered in an orange tablets, indistinguishable in color, size and form. Both preparations packaged in strips of 10 tablets for each. The codes of tablets were decoded at the end of the study after all patients completed the trial. Patients were randomly assigned to receive antidepressant therapy with one tablet of ascorbic acid (500 mg) per day or one tablet of placebo per day for eight-week.

The sample consisted of 8 men and 14 women with mean age 33.4 years, ranges from 19 to 59 years. The mental depression disease may be associated with other disease such as anxiety

(total of depression with panic attack, depression with obsessive compulsive disorder, depression with agoraphobia), and psychotic depression. The study showed that the disease is more prevalence in women than men. Findings indicate that married women are more suffering from depression as compared to single women. In educational status, patients with basic primary and intermediate school were suffering more depression than patient with higher level school and graduate qualification. House wives and patient with professional work are suffering depression more than jobless and students. There is no difference between patients who are living in capital city and who are living out of the capital.

Patients with antidepressants therapy, ascorbic acid treatment showed significant decrease in the agitation, anxiety (psychotic and somatic), hypochondrias, and total scores, compared to patients treated with placebo. Agitation, anxiety (psychotic and somatic), and hypochondrias were improved by ascorbic acid administration. There were no changes in physical examination parameters; while body weight was decreased among the treated group with placebo.

Total scores of HDRS-17 were decreased from  $21 \pm 1.25$  before treatment to  $5.38 \pm 1.01$  after treatment with antidepressant and ascorbic acid. Symptoms of depression were significantly decreased after the combined treatment of ascorbic acid and antidepressant drug compared to the same group before treatment. The symptoms of depression that decreased were depressed mood, feeling of guilt, suicide, early insomnia, middle insomnia, late insomnia, work and activities, agitation, anxiety psychic, anxiety somatic, somatic symptom-GI, somatic symptom, genital symptoms, hypochondrias; while there is no changes in scores of retardation, weight and insight compared to pre-treatment.

There is a significant decrease in the total score HDRS-17 from  $22.33 \pm 1.9$  before treatment to  $11.67 \pm 2.42$  after treatment with antidepressant and placebo. Symptoms of depression that improved are depression mood, feeling of guilt, early insomnia, middle insomnia, late insomnia, weight loss; while there is no changes in the scores of the work and activities, retardation, agitation, anxiety psychic, anxiety somatic, somatic symptom-GI, somatic symptom, genital symptoms, hypochondrias and insight.

At the beginning of the study, HDRS-17 scores did not show any difference between ascorbic acid and placebo treated groups; while at the end of the study, ascorbic acid improve agitation, anxiety psychic, anxiety somatic, hypochondrias, and total scores compared to the group treated with placebo.

The haematology, kidney function, lipid profile, liver function, and urine analysis were not changed before and after treatment in both groups. All parameters were within the normal range. Plasma ascorbic acid levels were increased in the group treated with ascorbic acid compared to the same group before treatment and to the group treated with placebo after treatment.

In general, the administration of ascorbic acid combined with antidepressant therapy reduced Hamilton depression rating scale compared to the antidepressant therapy effect without ascorbic acid administration. This indicates that ascorbic acid improves the antidepressant therapy and reduces their side effects [1].

### Reference:

1. Aburawi SM, Fathia A, Ghambirlou, Attumi AA, Rida A, et al. (2014) Effect of ascorbic acid on mental depression drug therapy: Clinical study. *J Psychol. Psychother* 4: 1.