

AGOMELATINE and DULOXETINE – A Combination for the Treatment of Depression

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Madam, when a person is suffering from major depressive disorder, they experience a severely depressed mood, along with low activity levels, that may persist for weeks at end. Depression approximately affects about 350 million people. According to The World Mental Health Survey, which was conducted in 17 countries around the world, it was found that on average about 1 in 20 people reported having an episode of depression in the previous year.

Depression is a global public health concern. The affected person is not only a low mood, but also sustains lack of interest, decreased energy, feelings of low self worth, and poor concentration. A merger of these symptoms produces a spectrum so wide, that the person becomes a liability to not only their own life, but to their families and to the country's. It is thus very important to be able to rightly tackle this disease before irreplaceable losses occur [1].

According to a research conducted at the Department of Psychiatry, Faculty of Medicine at University of Suleyman Demirel, Turkey, a combination of the drugs Agomelatine and Duloxetine, an antidepressant and a serotonin-norepinephrine re-uptake inhibitor respectively, aid abundantly in treating depression. The two drugs, it was found work in collaboration to reduce apoptosis, oxidative stress and Ca^{2+} entry through TRPM₂ and voltage gated calcium channels [2].

Agomelatine is a melatonergic agonist (MT₁ and MT₂ receptors) and a 5-HT_{2C} antagonist indicated in the treatment of major depressive episodes. A research at University Psychiatric Centre KU Leuven showed Agomelatine to have better restoration of sleep, good tolerability and a lower affect on level of liver enzyme thus indicating a low discontinuation rate [3]. Duloxetine, on the

other hand, is an SNRI. Combination of these two drugs together produce a protection front on apoptosis, caspase-9, mitochondrial membrane depolarization, ROS production and lipid peroxidation. Also, medium of entry of Calcium ions was modulated. It was observed, however, that Duloxetine affected this ion entry through TRPM₂ more than Agomelatine

Agomelatine paired with Duloxetine, as researches show, have a higher efficacy, a lower discontinuation rate, and a overall lesser affect on disturbing sleep patterns. However, it should not be forgotten that for patients of depression, medicinal therapy is not effective alone. Government and affected families should together support the patient through various cycles of counselling and rehabilitation so move past this dire disease.

The efficacy of the combination therefore needs to be further evaluated in this regard, with more clinical trials and meta-analysis.

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