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Taking the developments of child and adolescent psychopharmacology to the unreached in low resource countries

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Some 25 years back, children and adolescents were hardly the focus of treatment in psychiatry in low resource countries. Now we know that psychiatric illnesses starts early and many of these continue through the life. Treatments if started early do affect the progress of illness. Psychotherapy, though good, requires trained professionals, is expensive and is time consuming. Now with new regulations and encouragement of regulatory bodies we have some evidences and specific data to carry out pharmacological treatment of child and adolescent psychiatric illnesses. With limited number of child psychiatrist, every general psychiatrist, pediatrician and family physician need to master some of the concepts of child and adolescent psychopharmacology. This is the only way to reach the benefits of recent understanding to the greater mass of psychologically suffering children and adolescents and thus we should be able to decrease their plight. All these professionals need to master few drugs, their dosage schedule, adverse effects and interactions. They should know where to stop and when and whom to refer. The aim of this presentation is to build a model for academic exercise to be carried out with these professionals so that they develop some basic skills needed in this poorly explored area of knowledge.

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Postnatal melatonin treatment protect against affective disorders induced by early life immune stimulation by reducing the microglia cell and oxidative stress

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Systemic inflammation induced by neonatal infection may result as long-term hyperactivation of microglial cells and consequently an overproduction of pro-inflammatory cytokines, such as tumor necrosis factor (TNF-α), nitric oxide (NO) and lipid peroxidation. Those inflammation mediators can trigger behavioral affective and/or cognitive disorders. In the present study, we assessed the efficiency of melatonin (a cytokine modulator and antioxidant agent) to counteract prefrontal microglia activation and depressive-like behaviors in adulthood rats, which were injected with LPS 9 days following their birth. The effect of melatonin (5 mg/kg) was compared to the effect of minocycline (50 mg/kg), a molecule knows as an anti-inflammatory and to inhibit microglia activation. Our findings show that LPS injected animals had high levels of TNF-α, NO, lipid peroxidation production and microglial activation in the prefrontal cortex compared to control. The melatonin treatment induces a significant decrease of NO and lipid peroxidation levels in the prefrontal cortex without any significant effect on TNF-α and microglia activation. The melatonin treatment induces a significant decrease in the anxiolytic and depressive behavior provoked by the LPS administration. Taken together, these results indicate that melatonin has a protective effect against the LPS induced behavior change through its strong NO scavenging and lipid peroxidation reduction but not through the anti-inflammatory effects.

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