Serotonina aumenta a glicólise anaeróbia diminui a produção de ATP cerebral. Seria contra-indicados os antidepressivos nos tumores de cérebro?

Serotonin-induced decrease in brain ATP, stimulation of brain anaerobic glycolysis and elevation of plasma hemoglobin; the protective action of calmodulin antagonists.
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1. Injection of serotonin (5-hydroxytryptamine) to rats, induced a dramatic fall in brain ATP level, accompanied by an increase in P(i). Concomitant to these changes, the activity of cytosolic phosphofructokinase, the rate-limiting enzyme of glycolysis, was significantly enhanced. Stimulation of anaerobic glycolysis was also reflected by a marked increase in lactate content in brain. 2. Brain glucose 1,6-bisphosphate level was decreased, whereas fructose 2,6-bisphosphate was unaffected by serotonin. 3. All these serotonin-induced changes in brain, which are characteristic for cerebral ischemia, were prevented by treatment with the calmodulin (CaM) antagonists, trifluoperazine or thioridazine. 4. Injection of serotonin also induced a marked elevation of plasma hemoglobin, reflecting lysed erythrocytes, which was also prevented by treatment with the CaM antagonists. 5. The present results suggest that CaM antagonists may be effective drugs in treatment of many pathological conditions and diseases in which plasma serotonin levels are known to increase.
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