

عنوان مقاله:

Role of central opioid receptors on serotonin-Induced hypophagia in the neonatal broilers

محل انتشار:

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خلاصه مقاله:

Serotonin (Δ -HT) plays an underpinning role in appetite regulation and the opioid system has a role in the modulation of the ingestion behavior in birds. The current survey was aimed to evaluate the effect of opioid receptors on serotonin-induced hypophagia in neonatal broilers. During experiments, food-deprived chickens received intracerebroventricular (ICV) injection and thereafter, the cumulative food intake was measured after ۳۰، ۶۰، and ۱۲۰ minutes. In experiment ۱، to determine the effective dose of serotonin، the control solution and the various doses of serotonin (۲.۵، ۵، and ۱۰ μ g) were administered to birds. In the second experiment، groups received not only the control solution، but also an effective dose of serotonin (۱۰ μ g)، μ -opioid receptor antagonist (β _FNA، ۵ μ g)، and a co-injection of β _FNA (۵ μ g) and serotonin (۱۰ μ g)، respectively. The next experiments were similar to the second experiment، however، in place of β _FNA، the antagonist of κ - opioid receptor (nor_BNI، ۵ μ g)، the δ - opioid receptor antagonist (NTI، ۵ μ g)، and the agonist of μ opioid receptor (DAMGO، ۶۲.۲۵ pmol) were used in experiments ۳، ۴، and ۵، respectively. The results showed a dose-dependent hypophagic impact of serotonin. This effect was attenuated by β _FNA؛ however، nor_BNI and NTI had no effect. Furthermore، the diminishing effect of serotonin on food consumption in chickens was strengthened following DAMGO administration ($p < ۰.۰۵$). According to the results، the hypophagic effect of serotonin is possibly mediated through μ opioid receptors in neonatal broilers.

کلمات کلیدی:

Serotonin، Central opioid receptors، food intake، Anorexigenic effects، Broilers

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