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Effect of ketotifen and caffeine on weight changes in mice

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Background and Aims: Ketotifen is a strong and potent antihistamine and effective drug in the treatment of asthma. Taking this drug follows over weight in human being. Caffeine is a mild CNS stimulant and useful in asthmatic patients. Taking caffeine despite ketotifen is with increasing of consciousness and weight loss in human being. In the present study we tried to assess the separate administration and coadministration of these effective drugs in asthma, in the trend weight changes.
Methods: Male mice at the weight limit of 20-30 gr in 8 groups were randomly chosen and injected by following drug dosages for 45 days: control group (normal saline 10 mg/kg, ip) and 3 groups of ketotifen (4, 8, 16 mg/kg, ip), 3 groups of caffeine (4, 8, 16 mg/kg, ip) and one group of caffeine (4mg/kg, ip) in combination with ketotifen (4 Mg/kg, ip). Weight changes have been recorded and assessed every other 3 days for 45 days.
Results: The results showed that all of the drug dosages caused significant weight loss in comparison with the control group. In treatment group, co-administration of ketotifen 4mg/kg +caffeine 4mg/kg, significant weight loss was observed in comparison with control group.
Conclusions: Both ketotifen & caffeine caused significant weight loss after 3 weeks of injection at dosages of 4, 8, 16 mg/kg, ip. The effect of caffeine on weight loss matches with human studies while Ketotifen does not match. To get an exact mechanism in the weight loss caused by ketotifen, more studies are needed.

Keywords: Caffeine; Ketotifen; Mice; Weight changes