

博士論文 (要約)

Exploration of the reason for hyperphagia in mice
after the treatment of dapagliflozin

(Dapagliflozin 投与によるマウス過食の原因の解明)

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卒業論文の要約

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SglT2 inhibitors are widely used to treat type 2 diabetes. Although the SglT2 inhibitors have a favorable effect on body weight, it was reported that they have a stimulatory effect on food intake. To seek the mechanism underlying the hyperphagia caused by the SglT2 inhibitors, I examined the effect of dapagliflozin, a SglT2 inhibitor, on food intake, body weight and glucose levels in a variety of models in which appetite-related surgeries were performed. I observed the increase of food intake by the dapagliflozin treatment in mice that received either total-gastrectomy (TG), partial lipectomy (PLT) or sub-pancreatectomy (SPT). Interestingly, in the insulin-deficient diabetic model induced by streptozotocin (STZ), the increase of food consumption by the dapagliflozin treatment was not observed, suggesting a possible involvement of insulin in the hyperphagic action of dapagliflozin. Understanding the mechanisms underlying the compensatory hyperphagia will be helpful to achieve ideal glycemic control and weight loss by the SglT2 inhibitors.