

[課程－2]

審査の結果の要旨

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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.

This study can explore the physiological changes, especially the changes in appetite which is directly related to body fat during the combination of the SglT2 inhibitor treatment and the fat loss surgeries. Therefore, this study can examine the effect of the SglT2 inhibitor on the appetite in the models with the appetite-related surgeries of fat loss after the SglT2 inhibitor administration.

よって本論文は博士（医学）の学位請求論文として合格と認められる。