Organokine impact in obesity induced chronic kidney disease

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CURRENT DATA

Organ communication, through organokines, plays an important role in organ metabolism notably in kidney. Obesity affects organokine production leading to metabolic disturbances.

Background

Male/Female: Tubular lipid accumulation

AMPK involvement

Less vacuolated tubules in HFD females compared to males.

Organ Cross Talk

AMPK activation with AICAR reduces vacuolated tubule numbers. This activity was altered in HFD males compared to LFD males, but no alteration was shown in females. AMPK activity was correlated with adiponectin plasma level.

Materials and method

Serum organokines from mice were analysed with Multiple Reaction Monitoring Mass Spectrometry (MRM-MS). MRM-MS is cheaper and more sensitive than antibody-based methods.

Prospects

The detection of other organokines with MRM-MS is still in ongoing.

Results

Serum organokines from HFD and LFD male and female mice will be analysed and correlated with metabolic profiles and renal function.

This approach will be further developed in clinical studies to better understand organ cross talk mechanism notably in obesity induced CKD. This method aims to determine other potential biomarkers and to help therapeutic strategies.

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