



POSTER PRESENTATION

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# Correlation of leptin, neuropeptide Y and amylin in childhood obesity

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## Purpose

To investigate the correlation of the serum leptin, NPY, amylin in the childhood obesity.

## Methods

The body mass index (BMI), waist and hip circumference, blood pressure (systolic/diastolic), lipid profile, fasting glucose, insulin, leptin, neuropeptide Y (NPY), amylin were measured in 56 children (24 obese children and 32 non-obese controls). We calculated HOMA-IR and evaluated the relationship between each anthropometric data, metabolic bio-marker and diet regulating factor (leptin, NPY, amylin).

## Results

Insulin and total cholesterol, triglyceride, LDL-cholesterol levels of the obese group were significantly higher than those of the non-obese group ( $p < 0.05$ ). leptin, NPY, leptin/NPY ratio, amylin levels of the obese group were significantly higher than those of the non-obese group ( $p < 0.05$ ). leptin showed significant correlation with BMI ( $r = 0.379$ ,  $p = 0.043$ ), NPY ( $r = 0.377$ ,  $p = 0.044$ ), L/N ratio ( $r = 0.754$ ,  $p = 0.000$ ) in the obese group. amylin showed significant correlation with insulin ( $r = 0.400$ ,  $p = 0.048$ ), HOMA-IR ( $r = 0.459$ ,  $p = 0.028$ ) in the obese group.

## Conclusion

There is abnormality in central diet regulatory system caused by leptin and neuropeptide Y resistance in the obese group. And amylin showed significant correlation with insulin resistance

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