

EFFECTS OF H. PYLORI ERADICATION ON METABOLISM AND BODY WEIGHT IN OBESE AND NON OBESE PATIENTS.

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BACKGROUND

Many studies showed that H. pylori infection could be an independent predictor for insulinresistance and could regulate metabolism and body weight.

AIM

To evaluate changes in metabolism induced by an oral glucose tolerance test (OGTT) before and after antibiotic eradication treatment in patients colonized by H. pylori.

MATERIAL AND METHOD

Prospective case-controlled study with a sample of patients colonized by H. pylori. In an intra-subject analysis, clinical data and levels of ghrelin and GLP1 were analyzed at baseline and post-OGTT before and after antibiotic eradication treatment.

RESULTS

- ❖ We studied 32 patients (75% women). Average age was 49 ± 11.5 and 46.9% had personal history of gastrointestinal disease.
- ❖ We found a significant decrease of HbA1c and 120 Post OGTT glucose after treatment.
- ❖ Significant correlations between ghrelin with waist circumference and BMI (negative), and with glucose, insulin, HbA1c and LDL-Chol (positive). We also found significant positive correlations between GLP-1 and insulin, and between the difference in HbA1c and levels of GLP-1 post-treatment at all times after OGTT.
- ❖ The prevalence of obesity (defined as BMI ≥ 30) at baseline was 21.9% (n = 7)
 - ✓ No significant differences were found in obese patients before and after treatment, whereas non-obese patients showed significant decrease in levels of 120 Post-OGTT glucose (6.24 ± 0.44 vs. 5.53 ± 0.43 mmol/L, p = 0.032) and HbA1c (5.5 ± 0.1 vs. $5.3 \pm 0.07\%$, p = 0.038), both with successful H. pylori eradication.
 - ✓ Comparing the results before and after eradication therapy between non-obese and obese patients with successful H. pylori eradication, we found some significant differences pre-treatment such as fasting insulin (46.6 ± 6.5 vs. 116.2 ± 28.7 pmol/L, p = 0.001) and C-peptide (2.2 ± 0.1 vs. 3.1 ± 0.5 mcg/L, p = 0.007); and fasting insulin post-treatment (49.5 ± 4.3 vs. 105.5 ± 43.8 pmol/L, p=0.020).
- ❖ 78.1% of patients completed correctly the treatment and 81.3% achieved the eradication of H. pylori.

Table 1: Clinical and analytical variables pre- and post-treatment.

	Pre-treatment visit	Post-treatment visit	P
Weight (Kg)	71.9 \pm 2.2	71.6 \pm 2.4	0.509
BMI	27.1 \pm 0.8	27.1 \pm 0.9	0.861
WC (cm)	91.4 \pm 2.1	90.7 \pm 2.3	0.520
HC (cm)	102.7 \pm 1.5	104.8 \pm 2.0	0.127
SBP (mmHg)	124.2 \pm 3.0	121.8 \pm 4.1	0.457
DBP (mmHg)	77.9 \pm 1.6	79.9 \pm 2.1	0.283
Creatinine (mmol/L)	61.88 \pm 2.65	61.88 \pm 1.77	0.192
TG (mmol/L)	1.12 \pm 0.09	1.06 \pm 0.08	0.485
Total-Chol (mmol/L)	5.16 \pm 0.20	5.01 \pm 0.17	0.601
HDL-Chol (mmol/L)	1.22 \pm 0.06	1.25 \pm 0.07	0.084
LDL-Chol (mmol/L)	3.20 \pm 0.18	3.09 \pm 0.17	0.606
GOT (UI/L)	20.2 \pm 1.6	22.2 \pm 2.1	0.309
GPT (UI/L)	26.7 \pm 2.0	28.1 \pm 2.4	0.626
GGT (UI/L)	27.7 \pm 5.1	24.3 \pm 3.5	1.000
CRP (mg/L)	3.9 \pm 0.4	3.7 \pm 0.5	0.943
IGF1 (kU/L)	162.1 \pm 12.7	157.9 \pm 12.5	0.250
GH (mcg/L)	1.7 \pm 0.3	1.3 \pm 0.2	0.178
C-peptide (mcg/L)	2.4 \pm 0.1	2.4 \pm 0.15	0.819
HbA1c (%)	5.5 \pm 0.09	5.4 \pm 0.1	0.035*
HbA1c (mmol/mol)	37 \pm 0.56	36 \pm 0.62	

CONCLUSIONS

Significant improvement in carbohydrate metabolism was observed after H. pylori eradication. No significant differences in body composition, blood pressure figures and levels of ghrelin and GLP-1 were found after treatment, but nearly-significant decline in ghrelin. Significant correlations between plasma glucose and insulin with ghrelin and GLP-1 were found. More than 85% of patients achieve H.pylori eradication.

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