

# NO EVIDENCE OF IMPAIRED ORAL HORMONE SUBSTITUTION AFTER GASTRIC BYPASS SURGERY IN PATIENTS WITH MORBID HYPOTHALAMIC OBESITY AND HYPOPITUITARISM SECONDARY TO CRANIOPHARYNGIOMA

Peter Wolf, Yvonne Winhofer, Sabina Smajis, Renate Kruschitz, Karin Schindler, Alois Gessl, Greisa Vila, Wolfgang Raber, Felix Langer, Gerhard Prager, Bernhard Ludvik, Anton Luger, Michael Krebs

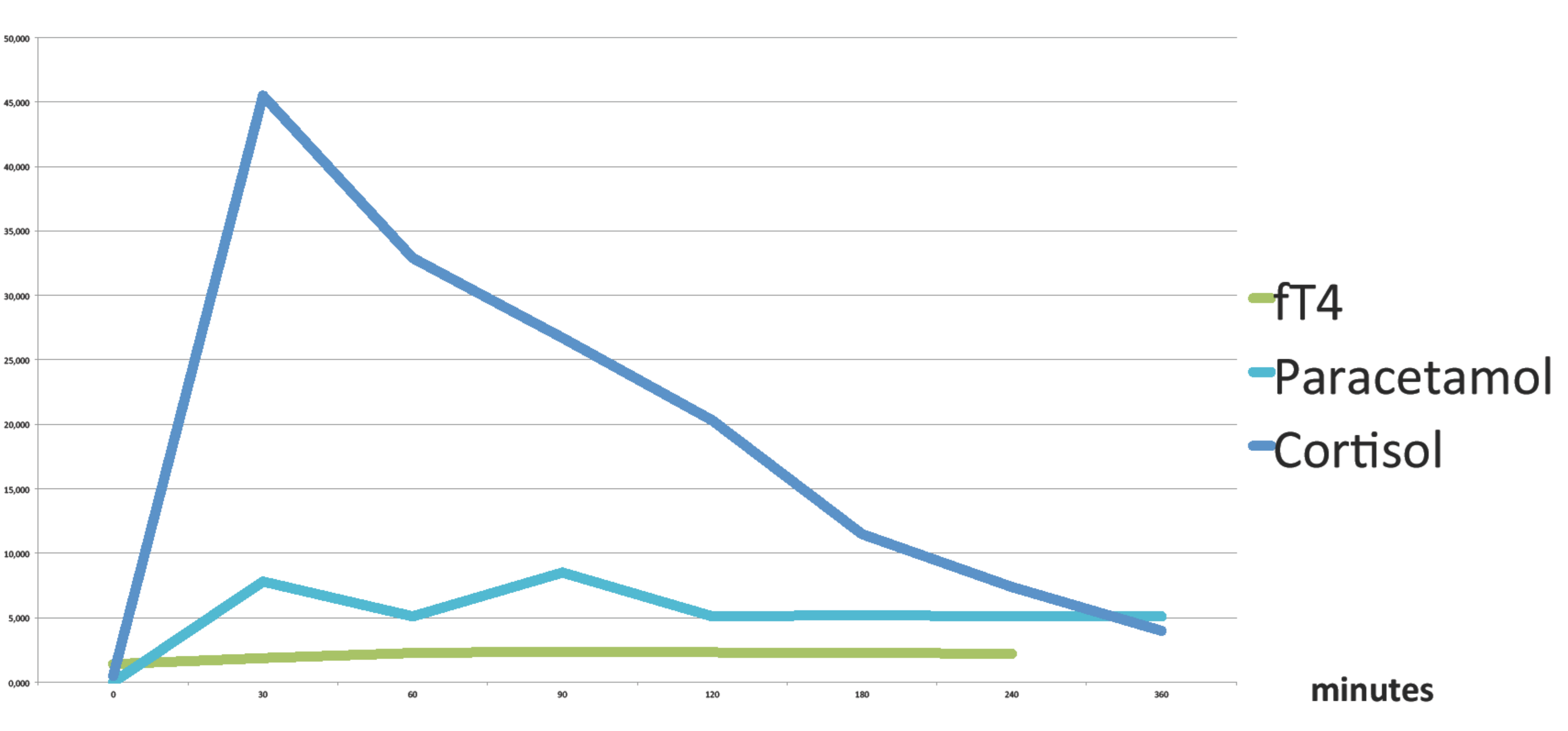
**Introduction:** Craniopharyngiomas (CP) are benign brain tumors presenting in childhood treated by tumor resection together with radiotherapy. In about half of the cured patients hypothalamic damage leading to eating disorders and obesity as well as to hypopituitarism, necessitating consequent hormone substitution therapy, is observed. Bariatric surgery is an efficient treatment strategy for morbid obesity. However, so far it is unknown, whether oral hormone substitution is hampered by impaired intestinal absorption, leading to severe hypopituitarism or adrenal insufficiency.

**Methods:** 4 CP-patients (3w/1m; BMI<sub>basal</sub> 49±7kg/m<sup>2</sup>) with hypopituitarism and morbid obesity treated by gastric bypass surgery were included in this retrospective analysis. Dosage of hormone substitution, hormonal blood concentrations, adverse effects of impaired drug absorption and anthropometric characteristics were investigated pre and 3 to 12 months post operatively.

**Results:**

- distinct weight loss in all patients (-35±27kg)
- No signs of adrenal insufficiency postoperatively
- No changes in daily dosage of substituted pituitary hormones

Dosage:	pre OP	post OP
L-thyroxin (µg)	156±44	150±30
Hydrocortisone (mg)	29±12	26±2
Somatotropine (mg)	0.9±0.5	1.0±0.4
Minirin (mg)	222.5±96	222.5±96



**Gastrointestinal hormone resorption test** following administration of Euthyrox 500µg, Hydrocortisone 20mg and Paracetamol 500mg was performed in one patient

**Discussion:** Our results in n=4 CP patients suffering from hypopituitarism indicate that oral hormone substitution therapy is not impaired following gastric bypass operation, probably making it a safe and considerable treatment strategy in patients suffering from hypothalamic obesity.

