

## **Deconvolution-based assessment of pituitary GH secretion stimulated with GHRH+arginine in Prader-Willi adults and obese controls.**

G. Grugni, E. Marostica, A. Crinò, P. Marzullo, G. De Nicolao, A. Sartorio

Clinical Endocrinology 79: 224-231, 2013.

Objective: The assessment of GH deficiency in adult patients with Prader-Willi syndrome (PWS) has been previously assessed through the evaluation of quantitative parameters, such as the peak value of GH response to exogenous stimuli. A comprehensive description of the pattern of secretory response obtainable by deconvolution analysis is still lacking. The aim of our study was to characterize the time evolution of responses of PWS subjects compared with obese controls.

Design and subjects: GH responsiveness was measured following the combined administration of GHRH+arginine to 65 PWS adults (24 males, 41 females) aged 18-41.2 years, and 17 age-, gender- and body mass index-matched obese controls. PWS subjects were analysed considering the stratification on different genotypes.

Measurements: GH response to GHRH+arginine was analysed in terms of peak values, standard area under the curves (AUCs), AUCs due to the stimulus, AUCs of the Instantaneous Secretion Rate signal and Secretion Response Analysis.

Results: In terms of both peak values and AUC, GH responses were statistically different between PWS UPD15 and PWS DEL15 subjects as well as between PWS UPD15 and obese controls. PWS subjects showed a lower and a more delayed GH response compared with obese controls. Moreover, PWS UPD15 subjects had the most delayed GH response.

Conclusions: Our findings demonstrate that impaired GH secretion in PWS subjects compared with obese controls regards not only amplitude parameters such as peak value and AUC, but also the shape of the secretory response, which is more delayed, especially for UPD15 subjects.

Se desidera avere la fotocopia di questo lavoro, per esclusivo uso personale, può fare richiesta per mail a: [info@cresceresani.it](mailto:info@cresceresani.it) indicando il titolo, gli autori, la rivista e il proprio recapito lavorativo (nome, cognome, indirizzo, CAP, città).