
Utility of an Oral Presentation of HCG (Human Choriogonadotropin) for the Management of Obesity: A Double Blind Study

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Abstract

Female obese volunteers participating in a double blind study, and submitted to the administration of an oral presentation of hCG (Human Choriogonadotropin) plus a VLCD (Very Low Calorie Diet), decreased specific body circumferences and skinfold thickness from conspicuous body areas more efficiently than Placebo+VLCD -treated subjects.

Since a significant fat proportion from total body fat is subcutaneously located (50 to 65 percent, depending on sex and fat distribution), this hCG metabolic activity would result in a reduction of the total body fat mass, the main cause for obesity. We suggested that the combination of a VLCD and oral hCG could not only trigger clinically significant changes in subcutaneous fat stores but simultaneously decrease body weight and modelate body contour.

hCG oral administration proved to be a safe and effective procedure on obese treated volunteers. No side effects were observed during the study. There are no reports in the literature regarding this administration route to compare our findings.

Compared to placebo treated subjects, volunteers who were managed with an oral administration of hCG coped more efficiently with daily irritating situations, were in a better mood, and handled home conflicts without stepping up family discussions.

KEYWORDS: Gonadotropin(s), Chorionic; Obesity; Adipose tissue metabolism; fat; overweight; beta-endorphin; lypolysis; lipogenesis.

Introduction

Few substances have been so neglected and misunderstood regarding its potential therapeutic actions as hCG, the acronym for Human Chorionic Gonadotropin.

First discovered by Ascheim and Zondek as far back as 1927 in the urine from pregnant women², thousands of articles were published regarding its action on gonads, but comparatively quite a few investigated its vast therapeutics potentialities, encompassing Kaposi sarcoma,³⁴ asthma,^{20,66} psychoses,²² artheriopatias,¹⁴ thalassemia,^{57,7,19} osteopenia,⁵⁷ glaucoma.⁵⁴

hCG is the glycoproteic hormone normally secreted by trophoblastic cells of the placenta during pregnancy.⁶⁷ It consists of two dissimilar, separately, but most presumably coordinately translated chains, called the alpha and beta sub-units.^{12,26,47,27,18,30}

The three pituitary hormones LH (Luteinising Hormone), FSH (Follicle Stimulating Hormone) and TSH (Thyroid Stimulating Hormone) are closely related to hCG in that all fours are glycosilated and have a dimeric structure comprising the alpha and beta chains as well.^{31,35,79}

The amino acid sequence of the alpha chain of all four human glycoproteic hormones is nearly identical. The amino acid sequence of the Beta subunits differs and accounted for by the unique immunological and biological activities of each glycoproteic hormone.⁶³ Beta hCG contains a carboxylic residue of 30 amino acids characteristic to hCG.^{11,52}

Its denomination; (Human Chorionic Gonadotropin) dates back from the early days, when it was found. hCG rendered mature infantile sex glands in experimentation animals (Gonadotropin) and it was secreted by the placetary chorion (Chorionic).^{2,91}

However, recent data suggest both terms can be misleading: normal human tissues from non-pregnant subjects,^{88,74,48,86,87} trophoblastic and non-trophoblastic tumors,^{33,6,90} bacteria,⁴⁹ and plants^{46,69} express hCG or a hCG-like substance.

The first report on hCG and obesity was published back as 1954 in The Lancet, by a British physician, Dr. A.T.W. Simeons.⁷⁰ After its publication, hCG was advocated for several years as a useful approach to obesity. The pendulum of its popularity swang back and forth

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