



FONDAZIONE
INTERNAZIONALE
MENARINI

Press Release

Calcium deficiency may be a hormone problem

Florence, 7 May 2015 - -The lack of thyroid hormone, produced by the parathyroids, four small glands in the neck near the thyroid, may lead to insufficient calcium in the blood and various other disorders. Until now there has been no specific treatment for hypoparathyroidism but replacement hormone treatment will shortly be available which could significantly improve the quality of life of persons suffering from this problem.

To understand how to use this new treatment, all the world's major experts will meet in Florence for the International Conference on **“The diagnosis, management and treatment of hypoparathyroidism”** which will take place in Florence from 7 – 9 May.

On this occasion, the Guidelines will be established in an area that still lacks indications. These will be the first Guidelines on the problem.

The conference is organised by Florence University, Columbia University of New York, United States, McMaster University of Oakville, Canada, Harvard Medical School of Boston, United States, and the Fondazione Internazionale Menarini.

«The parathyroid glands are small endocrine glands in the neck, positioned near the thyroid. Their function is to produce parathyroid hormone or parathormone (PTH) which contributes to maintain calcium level in the blood» explains **Maria Luisa Brandi, lecturer in Endocrinology at Florence University and co-president of the Conference.**

Parathormone plays a crucial role in the transmission of nervous signals, muscular contraction, blood coagulation and the functioning of various hormones and enzymes. For this reason, its concentrations in the blood must remain relatively steady but calcium deficiency is not always identified. «Suspected hypoparathyroidism is more frequent in

acquired forms, due to invasive neck surgery, carcinoma of the thyroid, malignant tumours of the oral cavity, the pharynx, all conditions in which the parathyroids can be removed or destroyed (as in radiotherapy) and in which a secondary consequence is hypoparathyroidism, continues Brandi. «**More complex to identify are congenital forms that begin during childhood**, even in neonates, in which diagnosis may be delayed. The paediatrician may suspect calcium deficiency in the presence of an autoimmune pathology. For example, a very marked form of oral candidiasis may be a pointer to check calcium concentration in the blood and the parathyroid hormone. After surgery, on the other hand, hypoparathyroidism may lead to a personality change, with memory disorders, a tendency to depression, so that symptoms may be associated with a psychiatric disorder and consequently not adequately treated».

Regrettably, these are not the only symptoms of hypoparathyroidism. In fact, shaking and rigidity, cataracts, cramps and spasms, tingling and numbness of the hands, abdominal pain, cardiovascular disease, heart failure, congestive heart failure (in children with hypoparathyroidism) and sudden death may occur.

Moreover, **up until now endocrinologists have not had effective means to contrast the pathology**. «The treatment available was a surrogate. We could administer calcium and vitamin D which increases intestinal absorption of calcium, but it was still a surrogate» adds Brandi. «Up until now hypothyroidism was the only endocrine disorder which we could not treat with hormone replacement. We can treat patients with any other endocrine disease with the missing hormone, as in the case of thyroid in which the subjects take thyroid hormones, in the case of suprarenal glands for which suprarenal hormones are administered or sex hormone disorders, for which patients are treated with sex hormones respectively for ovaries or testicles. Fortunately, in the immediate future, thanks to the new recombinant parathyroid hormone based-drug, we shall be able to improve the quality of life also for persons with hypoparathyroidism».

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