Bedside differential Diagnosis of aging Thyroid and diseased Thyroid

By Sergio Stagnaro

From the American Thyroid Association, https://www.thyroid.org/thyroid-disease-older-patient/, "A 72 year old woman with "fluttering of the heart" and vague chest discomfort on climbing stairs; An 80 year old man with severe constipation who falls asleep often; A 65 year old woman who has lost strength in her legs, causing difficulty in climbing stairs;she has recently lost 15 lbs in spite of a very good appetite; A 75 year old woman who has developed difficulty swallowing and a dry cough, accompanied by hoarseness, weight gain, and dry, itchy skin; A 78 year old man with hearing loss; An 84 year old woman in whom a hand tremor has caused her to give up favorite activities. She is so depressed that she will not eat, and she has lost 12 lbs in the last 4 months".

Thyroid hormone production, metabolism, and action change notoriously with aging. The prevalence of subclinical thyroid dysfunction is increased greatly in the elderly (1, 2). However, it is unclear whether mild thyroid dysfunction in the elderly is associated with adverse outcomes. Quantum Biophysical Semeiotic allows physicians to bedside recognize aging thyroid in a quatitative ways, unavoidable to put the differential diagnosis with pathogical hypothyroidism that requires replacement therapy (3-5).

"The endocrine organs, including the thyroid gland, undergo important functional changes during aging. It is known that the prevalence of thyroid disorders increases with age. Importantly, subclinical disturbances of thyroid function are more frequent than overt diseases in the elderly. Moreover, the clinical course of thyroid diseases in elderly people differs from that observed in younger subjects; namely, symptoms are more subtle and are often attributed to normal aging, and therefore, require special attention in elderly individuals" (2).

Subclinical hypothyroidism, till now difficult to be bedside recognized, is characterized by normal free thyroxine (FT4) and increased thyrotropin (TSH) levels. From Quantum Biophysical Semeiotic view-point, there is Microcirculatory Activation, type I, associated, in neuronal centre of TSH-RH and microcirculatory dysactivation in the thyroid gland. The two parametric values are correlated with the severity of the underlying disorder (6, 7).

Easier to be evaluated by physician proved to be the assessment of the Latency Time (NN: 8 sec.) and Duration of Thyroid – and TSH-RH - Aspecific Gastric Reflex (NN: > 3 sec. – 4 <) .

In health, Latency Time of both reflexes is 8 sec., and Duration > 3sec. – 4 sec.< .

On the contrary, in hypothyroidism TSH-RH - Aspecific Gastric Reflex is more than 8 sec., with normal duration, but Thyroid – Aspecific Gastric Reflex is pathologically reduced, and the duraton is more than 4 sec. As usually, the parameter value are related to the seriousnes of underlying disorder.

The prevalence of subclinical hypothyroidism increases with aging and ranges from 3 to 16 % in individuals aged 60 years and older. In medical practice a notable problem is the bedside diagnosis of both asymptomatic thyroid aging and the differential diagnosis between aging thyroid and diseased thyroid.

Overlooking the QBS predisposition to brain ATS with or without senile dementia (8) , Authors cannot state if both overt hypothyroidism, and the subclinical hypothyroidism in elderly subjects are associated or not with impairment of physical and cognitive function,. Moreover, there is not association between subclinical hypothyroidism and incident coronary heart disease, heart failure or cardiovascular mortality. Similarly, total mortality was not increased in subjects with subclinical hypothyroidism, although the risk of CAD events and of CAD mortality increased with TSH levels 10 mU/L or higher.Overlooking ATS Constitution-Dependent, CVD Inherited Real Risk all previous researches on the relation between hypothyroidism and are fundamentally biased (12-18).

Importantly, a quite high rate of reversion of subclinical hypothyroidism to euthyroidism in individuals aged at least 65 years with lower baseline TSH levels (4.5-6.9 mU/L) and antithyroid peroxidase antibody (TPOAb) negativity (≤ 37 IU/L) was observed [6]. In turn, higher TSH levels and TPOAb positivity were independently associated with lower chance of reversion to euthyroid status; TSH levels ≥10 mU/L were independently associated with progression to overt hypothyroidism (2).

Quantum Biophysical Semeiotic allows physicians to realize the differential diagnosis of aging thyroid and diseased thyroid: after having evaluated the parametric values of the thyroid-gastric aspecific reflex at basal line, a second evaluation is performed after 10 seconds of stimulation of TSH-RH secretion by means of intense (1,000 dyne/cm.^{2}) of related trigger-point.

Exclusively in aging thyroid the Latency Time appears significantly increased, rising to its double value, from 8 sec. to 16 sec.

On the contrary, in diseased thyroid, under identical experimental condition, latency time increases to a maximum of 50%, rising to 12 sec. or less.

There are obvious indications for overt hypothyroidism treatment. In turn, indications for treatment of subclinical hypothyroidism in elderly are still quite controversial . Nevertheless, the replacement therapy with L-thyroxine is not uniformly recommended in elderly people with subclinical hypothyroidism due to aging gland. Moreover, despite improvement of lipid profile due to treatment of L-thyroxine in subclinical hypothyroidism, there is no clear evidence that this beneficial effect can be associated with decreased cardiovascular or all-cause mortality in elderly patients (19-22).

In my opinion, overlooking Constitution-Dependent, Inherited Real Risks, Authors cannot solve the problem about the relation of aging thyroid and longevity. (23).

In conclusion, the altered thyroid function may play, via different mechanisms , a relevant role in lifespan regulation. Namely, age related, decreased thyroid function may lead to extended longevity.

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