

The climacterics and menopauses: paraphysiological bio-neuro-endocrine evolution

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Introduction

There is a physiological interaction, functional and protective action between neurotransmitters and hormones that have not yet been fully codified. The dynamics of these metabolic substances is dependent on changing endogenous and exogenous factors. The same potential and variability of expression (demand-response) produce different systemic inductions we call para-pathological situation determining a reduced quality of life of every woman in menopause. These events are coded and predictable only if you have a comprehensive understanding of the female body. It would thus produce a coherent response to these functional and therapeutic events of brainstorming that have resulted not only as a cognitive function and systemic body decrease but also in terms of drugs and specialistics consulting, giving an inevitable loss of quality of life.

Aim of the study

From the time that the ovarian reserve ceases upon cessation of the menstrual cycle in an irreversible situation, you have two bio-neuro-hormonal definitions: *peripheral climateric* and *central climateric*. They are followed by three different conditions of the same situation as defined: *limbic menopause*, *hypothalamus menopause* and *central menopause syndrome*.

Observations and deduction

Those frameworks, different from both clinical and symptomatic point of view are independents units

from hormonal impregnation and need custom therapy to stabilize symptoms properly.

Female neuro-endocrine axis need a stimulating and protecting action from the estrogen on the direct pituitary and hypothalamic gland.

Each step and especially the *bio-processing of signals* from *chemical* (neuro-hormone cytokines) to *electrical* (*neuro plasticity* and *dielectric phasic potential*) and the resulting effector response depends on hormone conditions that predisposes to the possible neuro-biological response due to the estrogen presence.

In turn, the sex hormone acts at the level of neuronal cells in different ways by interacting with modulatory responses in microglia and neuronal astroglia in different ways depending on the pro-inflammatory state.

The concept of general knowledge is essential as the metabolic state of the body exerts a central question in this report answer: from inflammation of excretory organs, connective, enteric (dysbiosis or candidiasis) recruited through direct paths of the lymphatic spread of blood cytokines and chemokines dissemination, myco-toxins or fractions that are viral tropism are highest in the cerebral cortex (the brain is the only organ that has no potential to accumulate glycogen but extremely limited in time and needs a steady flow through the metabolism of cholesterol, triglycerides above).

So this inflammatory event has its maximum expression at both central and peripheral neurons. Predisposed to neuro-biological response due to the presence of estrogen (Table 1).

TABLE 1.

Defect production	Metabolic defect	Defect-induced	Receptor defect
Ineffective response	Variable response	Answer blocked	Desensitization

The endocrine system is not able to be modulated independently, only through a pure chemical interference factor (hormone-receptor-effector-hormone) but through a great transformation of electrical messages that are translated from the hypothalamus (electro-neurochimica) in chemical substances (neurotropic) which in turn are transformed through a process of translation of-chemical hormones by the anterior pituitary lobe and from there superspecifica induce production of factors Realising hormones (ACTH, TRH, etc.). This will produce target organs for a chain reaction back to the periphery to the CNS which will regulate productivity itself.

This process explains the process of circuit corticalized information devices and their endocrine control. To all this we add that any alteration in this process can cause physiological stress response. Endocrinological studies show that a stress condition can interfere directly on neuro-endocrine female body as the main name plate but not the reproductive organs through the adrenal glands that produce cortisol ACTH reactive interference. Cortisol, in turn, causes a direct negative feedback towards the hypothalamus and anterior pituitary lobe that consequently the produce the same modulation of estrogen.

The same stimulus depending on the stress-neuronal cells (microglia, neurons, astrocytes) with which it in-

teracts has a release of substances in response to chemokines and cytokines stimulating a systemic inflammatory process. Consequently, depending on the cell phone off again possible, neuro-plasticity, physiological and metabolic capacity of connective tissue apoptosis is a "restitutio ad integrum" of the system but at the time of menopause in the hormonal storm in the first period of post-menopausal such an event may be exacerbated, unstable and reversible if recognized!

This is why women already in menopause and post-menopausal women may develop other symptoms attributable to peripheral or central involution of the central nervous system and metabolism. In Tables 2 and 3 characteristic symptoms of the various types of events have been coded.

TABLE 2.

Climateric Periferic Synd. =>	CPS Climateric Central Synd. => CCS
Hormone deficiency / reproductive	Increased aggression/Hyperexcitability
Anxiety / Insomnia	Small panic attacks
Headache / Migraine	Lite Hot flashes / sweats
Reduced Libido	Hinstability Hypertension
Mood Swings	Increased vascular tone
Depressive State	Weight gain weight
Loss of Concentration / Memory	Digestive disorder

TABLE 3.

Menopause Limbic Synd.=>MLS	Menopause Hypothalamus Synd. => MHS	Menopause Central Syndrome => MCS
Anxiety / Insomnia	Increased aggression	Ipoergia
Mood Swings	Hyperexcitability	Altered sleep-wake rhythm
Headache / Migraine	Hor flashes / sweats	Progressive cachexia
Depressive State	Hypertension	Progressive loss of mental agility
Reduced Libido	Increased vascular tone	Cardio-pulmonary disease
Loss of Concentration / Memory	Weight gain weight	Multiple dysmetabolism
Alzheimer Type Dementia	Digestive disorders	Intestinal malabsorption / intolerance multiple / allergies