

What treatments are possible for patients with EHS and/or MCS ?



The ARTAC and ECERI clinical trials

1. Medical Ethics

Medical ethics requires treating patients according to the best available scientific knowledge. As early as 2009, Professor D. Belpomme at the Paris University Georges Pompidou European hospital started to care for patients claiming to be EHS and / or MCS, and proceeded, for the first time (with the support of the ARTAC research group) to set up and carry out standardized clinical procedures for the diagnosis, prognosis and treatment of these patients on a scientific basis. This patient care was always carried out without waiting for the results of the undergoing studies, with baseline data necessary for the trial coming from the medically-necessary patient evaluation and diagnosis. These human studies were hypothesized to support a causal role of EMFs and / or of chemicals in the genesis of the patients pathologies. Based on the results of these trials which included the development of new biochemical and imaging techniques, highly specialized consultations of environmental medicine were set up in the Allera-Labrouste private hospital in Paris (75015), where patients were offered a standard treatment, derived from the new techniques that ARTAC developed.

2 . A standard treatment

The following treatment protocol was developed prospectively by the ARTAC group. It is based on the results of biochemistry and imaging results obtained from each patient and therefore must be adapted to each patient's particular condition. Generally it is based on the administration of antagonists for the H1 receptor in order to normalize hyper-histaminea (using the most up to date anti -H1 antihistaminic); antioxidants; natural plant-derived brain revascularization agents, high dose vitamins B1, B2, B6, D₂-D₃, Omega 3 oils and zinc. We advise patients not to use food supplements nor homeopathic medicine.

Our experience indeed is that homeopathy as well as food supplements taken blindly are ineffective in these pathologies, whether EHS or MCS. In addition we recommend patients do not take agents that treat superficially the symptoms of inflammation. We also recommend when possible the gradually withdrawal of psychotropic drugs if they have been prescribed without reliable science-based medical reasons, which is unfortunately too frequently the case. In our specific experience oral melatonin is not efficient for treating insomnia, even in the case of urinary melatonin deficiency.

Early estimates show that our new standard protocol, when correctly administered and adapted to the biologic condition of each individual, causes regression of the clinic-biologic intolerance in nearly 60% of EHS cases. Likewise, use of this protocol in MCS patients gave positive results in similar percentages of cases. Especially notable is the brain blood reperfusion observed in nearly 80 % of our cases after receiving the standard treatment.

3. A distinction between intolerance and hypersensitivity

Although patients frequently improve significantly their quality of life by reducing intolerance symptoms clinically and biologically (some patients report returning to an almost normal social life), previous treatment

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protocol have been associated with a poor effect specifically on EHS and / or MCS.

Hence a need arises to distinguish the clinical success of our standard treatment from the potential success of primary prevention measures against electromagnetic and/or chemical hypersensitivity.

This led us to confirm that the biologic distinction between symptomatic intolerance and hypersensitivity is of therapeutic value. That is, we showed that the intolerance symptoms decrease and even disappear in patients under the standard treatment (patients scored with "an incomplete or complete response"); however this treatment clearly does not alleviate hypersensitivity itself. In short, future research for example on brain memory processes to avoid intolerance should be critical to avoid the occurrence of hypersensitivity and to induce its regression, given that the efficacy of such treatments is lacking.

However due to the cerebral reperfusion and the normalization of the biochemistry tests obtained frequently with the standard treatment, we suggest that it may stop and avoid the evolution of these neuro-inflammatory pathologies towards Alzheimer's disease, autoimmune disorders and / or cancer; if it is administered as early as possible – i.e. when biologic abnormalities are mostly reversible.

4. Current clinical trials

The ARTAC and ECERI research groups currently are engaged in clinical trials aiming at making our standard treatment even more effective. We are testing the effects of cerebral vasculators, antioxidants and anti-histamines, as well as on other drugs.

A phase I-II patient study testing the clinical and biological effects of a *fermented papaya* preparation, with ARTAC collaborating with the Osato Research Institute (Japan), has just ended. Performed prospectively on thirty patients selected according to strict EHS criteria, this study produced the following data.

Clinical response: In all cases, tolerance to the fermented papaya preparation was excellent. In about half of the cases, the patients were clinically improved – however most often incompletely - including a regression of headache and of cognitive deficiency .

Cerebral hypoperfusion: All included patients showed brain hypoperfusion, mainly in the capsulo-thalamic area of one and / or of the two temporal lobes. The fermented papaya preparation normalized hypoperfusion in nearly 90 % of the cases. In one case where Ginko Biloba (Tanakan ®) revealed to be inefficient, the fermented papaya preparation proved to be effective. In another case, the reverse was observed. There might be therefore no cross-resistance between the two natural product preparation. This remains to be confirmed in a further clinical study.

Antioxidant defenses: The level of antioxidant defenses in the blood of EHS patients was carefully evaluated before and after treatment. Several patients expressed lower antioxidant defenses, as evidenced in particular by an increase in nitrotyrosine blood levels. Unexpectedly, the fermented papaya preparation did not correct the antioxidant defense deficiency. Research continues by testing the antioxidant effect of other products, such as *L -carnosine*, a dipeptide which seems to be associated with antioxidant and heavy metal detoxifying effects.

Vitamin D deficiency: A strong vitamin D2 - D3 deficiency has been observed before treatment in many patients. The fermented papaya preparation did not correct such a deficiency. The action mechanisms of the deficiency still remain unknown, since a lack of sun exposure is not an issue here.

Micronutrient and other vitamin deficiency: No vitamin deficiency other than vitamin D2 - D3 was observed. Only a zinc deficiency was observed, not corrected by *fermented papaya*; the mechanism of which is also unknown..ARTAC's current research now focuses on zinc supplementation.

In summary, although fermented papaya appears to be an effective cerebral revasculator, therefore improving patient clinical condition (decrease in headache and cognitive impairment), when used alone it does not usually give a complete clinical response nor leads to a normalization of biological parameters such as antioxidant

defense levels, vitamin D and zinc blood levels. This leads ARTAC and ECERI to study the effects of fermented papaya in combination with other products such as vitamin D, zinc and L-carnosine in the framework of a randomized comparative clinical trial testing this combination neuro therapy compared with our current standard EHS-MCS treatment protocol.

5. Dental care



Medical treatments of EMF and / or chemical intolerance should include the withdrawal of tooth metallic fillings as metallic fillings may trigger or aggravate EHS and/ or MCS. To do this, special precautions should be taken in order to avoid any heavy metal and particularly mercury release during the removal - careful procedures by an experienced and competent dentist are crucial. The Association Non au Mercure dentaire (No to Dental Mercury) has guidelines:

[PRECAUTIONS FOR WORKING ON A TOOTH FILLING](#)

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