

## NEURONS, VIRUSES, INFECTIOUS DISEASES AND VACCINATIONS: A STAKE OF PUBLIC HEALTH

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Top-levelled international football and rugby teams usually train in teams on other sports such as volleyball or handball. Sportsmen work on their flexibility, their quickness, and the group cohesion. The problem of the top-levelled sports teams consist in training altogether: quickness, efficiency, and coordination exercises in other special fields.

It is always a great pleasure to watch exceptional players training themselves, to see how interested they are in their games, how careful they are with mutual aid and passes for a beautiful exercise. The players test their coordination in other fields. By definition, they are all friends, even if they are in a state of competition.

It is a formidable transcendental human lesson given by these young men while they are playing with such radiance.

It is the same with physicians having different specialities. They can meet on similar stakes, for example, drawing up a diagnosis in front of a patient.

Neurology and neurorehabilitation research stands at the crossroads of many other specialities: Traumatology, ophtalmology, orthopedics, endocrinology, oncology and as far as fundamental sciences are concerned: Virology and Immunology.

Occasionally, Neurology can also be linked with Dermatology. Facing the challenge induced by the disease, the union and the dialogue between physicians and biologists can be a real success in our multidisciplinary meetings.

What matters is the prevention of an infection, which may be contagious whereas it may appear as an insufficient analysis of the observed symptoms. It was the Parsonage-Turner Syndrome's case and the discovery of the part played by the great herpes virus family.

Inducing protection must be favoured against infection which is taken into account, and it is a long way to go as there are many difficulties before overcoming this particular infection.

Physicians as well as patients must wait. Treatment and cure will take a long time. In this particular case, the cure and the protection which have been expected for years, the anti-Herpes treatment and the anti-Varicella Zoster vaccine, became suddenly efficient. The goal was reached, the patient was cured, and he had an efficient treatment against a fearful infection which was finally overcome.

Some keywords may be reminded: neuralgic amyotrophy-bilateral phrenic paralysis, they describe the Parsonage-Turner Syndrome. The neurotropic herpes virus presence followed by appropriate anti-herpes therapy was the discovery of the syndrome's origin. "Sensory nerves are almost invariably the target cells, and motor neurons may be involved" during all kinds of herpes infections.

The hypothesis of the inductive role of viruses of the herpes family in the Parsonage-Turner syndrome was substantiated, the patient's immune deficiency covers the HSV2, HHV3, HHV4, HHV5 and HHV6 Ab

levels. This led to the control of herpes in the family lineage: as a matter of fact, his daughter presented alterations of her serological herpes antibody (AB) levels.

A treatment has been found concerning Herpes Viral Origin of the Parsonage-Turner Syndrome: Highlighting of Serological Immune Anti-Herpes Deficiency Cured by Anti-Herpes Therapy.

Our first human meeting as a child is with Varicella Zoster Virus (HHV3) exhibited by the disease. There are three words for this unique disease: Chickenpox/Shingles/Varicella. Recurrent Herpes Simplex (HSV1/HSV2) infections can follow. This is related to an immune herpes defect facing the Varicella Zoster virus (HHV3) and then, with time, the Herpes Zoster disease (HHV3) may follow as well. The first Herpes immune deficiency could bring about the deficiency against other herpes viruses family. They could be concerned as witnesses of a global herpes immune deficiency.

However, other pathogenic herpes viruses can be considered, it is one of my research fields.

We can remind the interest of such a vaccine against another neurotropic virus: Poliomyelitis virus. A few months ago, when I was in Kenya, a real paradise in tropical Africa, I admired the extraordinary action of the health secretary. She engaged herself into a vaccination campaign against poliomyelitis with personalities and health key figures. We can mention the First Lady Margaret Kenyatta, surrounded by many health state secretaries and the UNICEF as well as many services appointed to health controls:

5 million children were successfully vaccinated against the poliomyelitis according to the Nairobi documents published on August 15<sup>th</sup> 2015.

For the last fifteen years, a link has been observed between Herpes Simplex viruses (HSV1/HSV2) and HIV-1 infections. These herpes diseases must be related to a primordial immune deficiency against (HHV3) Varicella Zoster virus.

Herpes Simplex virus recurrent diseases can be cured by the administration of the Varicella Zoster vaccine as we observed and published recently. It will be interesting as a proposal, to think about this anti Varicella Zoster vaccine to protect against Herpes recurrent diseases.

The hope lies in the anti-varicella Zoster vaccine which will be able to prevent recurrent Herpes infections. Why? Because these herpes viruses (HSV1, HSV2) are related to HIV-1 contamination. My group of researchers and I are working on this hypothesis. This is our hope for the near future.