The role of retroviruses in chronic illness – a clinician's perspective

The role of retroviruses in chronic illness is greatly disputed in academic circles. However, at the Sophia Health Institute Dr DIETRICH KLINGHARDT, MD, PhD, reports seeing significant improvement in treatment outcomes – in the most severely affected patients with chronic illness – when anti-retroviral strategies are included.

The results we are seeing at the Sophia Health Institute at our locations in Seattle and Marin County would not have been possible without the brilliant work of Judy Mikovits, PhD.

What is published and what illnesses are potentially caused by, or have as a contributing factor, activated retroviruses?

- CNS-related illnesses: ME/CFS, Gulf War Syndrome, Autism, MS, Parkinson's, ALS, Schizophrenia
- Auto-immune diseases: Lupus, Crohn's, Hashimoto's Thyroiditis, Polymyositis, Sjogren's syndrome, Bechet's Disease, primary biliary cirrhosis
- Cancer: prostate, breast, non-Hodgkin's lymphoma, chronic lymphocytic leukaemia, mantle cell lymphoma, hairy cell leukaemia, bladder, colorectal, kidney, ovarian.

To that I am adding a list of other illnesses that have responded under my care to retroviral interventions: intractable Lyme disease, mould illness, insomnia, brain fog and all stages of a deteriorating brain, most childhood illnesses including ADHD and behavioural problems, asthma, breast cancer, lung cancer and many more.

Working backwards

What are retroviruses? The more familiar DNA viruses such as those from the "herpes family" – and many others – work their way from DNA over to RNA and from there to the manufacture of viral proteins. Retroviruses work their way backwards – from the RNA to the DNA – and then forward again from there.

Retroviruses are subdivided into different-lettered classes – Beta Retroviruses: HERV-K. Gamma Retroviruses: HERV-H and HERV-W.

The generally accepted key contributors to chronic illness are inflammation, oxidative stress and microbial infection. All of these are known triggers for retroviral activity, and in turn are also caused by retroviral activity.

Both human and animal retroviruses can infect the central nervous system (CNS). These are associated with many diseases of the CNS and cause neurological disease by several mechanisms:

1. Directly through infection of immune cells which traffic to the brain;
2. Indirectly through increases in proinflammatory cytokines and chemokines, or
3. In the absence of detectable brain inflammation indirect effects known as "bystander effects"- causing chronic retroviral replication of immune cells.

A retrovirus works via the enzyme "reverse transcriptase". Once inside the cell, it uses the enzyme to force the cell to create viral DNA. This viral DNA becomes integrated into the host cell DNA. A retrovirus integrated into our genome may be passed from mother to child during pregnancy (Sakuma et al, 2012).

Only 2% of our DNA is protein-coding, but 6-8% of our DNA is retroviral DNA – passed down to us from our ancestors as scars from our constant encounter with an often hostile microbial and virus-rich environment (Stoyle, 2006, Mayer et al, 2011; Li et al, 2001). These viruses are referred to as Human Endogenous Retroviruses or HERVs.

However, not all embedded retroviral DNA is bad. Some sections have become a functional part of our genome because they have given us an evolutionary advantage, such as the formation of the p53 gene regulatory network (Shin et al, 2013; Barbusecu et al, 2001). Other retroviruses have to be silenced throughout life, mainly through DNA methylation and acetylation.

The transcription of retroviral DNA makes the infected person susceptible to numerous de-novo genetic mutations, including MTHFR, DNMT and other genes which control methylation. Many other illness-producing effects are known, implicating HERV-K in the pathogenesis of neuroinflammatory and autoimmune illnesses. For a patient to get well today, it is rarely enough to just interpret the genomic testing and to substitute accordingly.

Acquiring infection

How do we become infected? Retroviruses can be acquired (inhalation, blood-based products, physical contact) or the viruses already present in our DNA can be activated through influences such as a viral infection or chronic inflammation (Manghera and Douville, 2013).

For example, the Epstein Barr virus induces expression of the HERV-K envelope gene and the transactivation of MSRV, the Multiple Sclerosis retrovirus (Mameli et al, 2007; Sutkowski et al, 2001). Herpes simplex type-2 activates members of the HERV-W family. These and other mechanisms are likely responsible for the activation of HERVs seen in rheumatoid arthritis, SLE, Sjorgens disease, schizophrenia, autism, MS and cancer. Cell phone radiation has disabled many of our protective proteins (Fragopoulou et al, 2012) and so have many of the food-based toxins such as glyphosate (Seneff et al, 2017) and air-based inhalants (aluminium etc). An unintended source of retroviruses are some vaccines as reported in *Frontiers in Microbiology* in January 2011).

Diagnosis

Currently PCR testing is only available to the research community. We have to rely on indirect parameters:

- decrease of CD56 NK cells (CD56 is involved in adhesion, migration, growth, differentiation and other cellular functions); downregulation of IL-13, IL-2, IFN gamma, TH-1 cytokines (J. Mikovits et al, 1998)
- upregulated levels of TH-2 cytokines: IL-4, IL-10 and pro-inflammatory cytokines: IL-1, IL-6, IL-8 and TNF-alpha.
- elevated levels of TGF beta-1: has profound effects on innate and adaptive immunity through stimulation of mast cells (often mistaken as mould-related). This may be the true cause of mastocytosis.

Other practical markers from my experience: low wbc (white blood count below 4500), low CD 56. I always include the CD 57 to rule out an active *Borrelia burgdorferi* infection as compounding factor.

Treatment

When the retroviruses are effectively addressed early in the treatment of chronic illness, other issues such as bacterial infections (Borrelia, Mycoplasma, Bartonella etc), mould illness, EBV, CMV, HHV-6, silent inflammation, parasites, heavy metal toxicity and many other problems become less symptomatic and often undetectable – and respond much better to treatment, even to interventions that have failed before.

Plants have been exposed to the same retroviruses as us, but for 300 million years longer – and many have developed potent adaptogens. Even though drugs like Truvada and AZT can be successfully used, I prefer the use of plant-based products that have unique anti-retroviral properties. A few examples with the key references:

- Scutalaria root (Ruscetti et al: "Inhibition of HIV infection by baicalin – a flavonoid compound purified from Chinese herbal medicine", *Cellular & Molecular Biology Research* 39, 2 (1993): 119-124).
- Cistus incanus (Rebensburg et al: "Potent *in vitro* antiviral activity of Cistus incanus extract against HIV and Filoviruses targets viral envelope proteins". *Scientific Reports* 6 (2016): 20394).
- Broccoli sprouts (Furuya et al: "Sulforaphane inhibits HIV infection of macrophages through Nrf2." PLoS Pathogens, 12.4 (2016): e1005581)
- St John's Wort (Meruelo, Lavie and Lavie: "Therapeutic agents with dramatic anti-retroviral activity and little toxicity at effective doses: aromatic polycyclic diones hypericin and pseudohypericin." Proc Nal Acad Sci 85.14 (1988): 5230-5234).

In addition, I like to put my patients on a high dose of seleno-cysteine (commonly 800mcg, a dose that has been established as safe (Yang, G.; Zhou, R. (1994) "Further Observations on the Human Maximum Safe Dietary Selenium Intake in a Seleniferous Area of China". *Journal of Trace Elements and Electrolytes in Health and Disease*. 8 (3–4): 159–165. Baum et al. "High risk of HIV-related mortality is associated with selenium deficiency." *JAIDS* 15.5 (1997): 370-374).

Suramin, an old anti-parasitic, has turned out to be one of the most effective anti-retroviral agents. Retroviruses activate the "cell danger response" and the P2 purinergic receptor on each cell. Suramin downregulates this receptor and inhibits the binding of growth factors TGF-beta, EGF, PDGF to their receptors and thus antagonises the ability of these factors to stimulate growth of tumour cells. It can be given iv every six weeks. I prefer giving daily homeopathic doses (Mitsuya et al: "Suramin protection of T cells in vitro against infectivity and cytopathic effect of HTLV-III." *Science* 226.4671 (1984): 172-174).

When we use suitable liposomal extracts of plants in proper dose and frequency, together with selenium and "energetic copies" of immune modulators like suramin, olmetarsan (vitamin D receptor), rapamycin (mTOR), significant results can be achieved in the treatment of chronic illness that were not possible before. This new therapeutic approach should always be combined with the synergistic use of EMR protection, treatment of Lyme and co-infections, mould and metal detox.

• On June 10, Dr Klinghardt will present a one-day seminar on the correct and effective use of anti-retroviral interventions in chronic illness. For more information and to book see news story on page 9 and visit www.Klinghardtinstitute.com.

About the author

Dr DIETRICH KLINGHARDT studied medicine and psychology in Freiburg, Germany, completing his PhD on the involvement of the autonomic nervous system in autoimmune disorders. Early in his career he became interested in the sequelae of chronic toxicity (especially lead, mercury, environmental pollutants & electromagnetic fields) in the course of illness.
While working in India he encountered Eastern concepts of disease aetiology and blended them with his Western training. This laid the foundation for his 5-level system of Integrative Medicine. In the US he spent three years as a full-time emergency physician before becoming Medical Director of the Santa Fe Pain Centre.
Increasingly aware of the limitations of conventional medicine when dealing with chronic conditions, he trained in Ericksonian hypnotherapy and began to include body-oriented psychotherapeutic and counselling approaches in his work, along with neural therapy, mesotherapy injection techniques and applied psychoneurobiology. Dr Klinghardt has contributed significantly to the understanding of metal toxicity and its connection with chronic infections, illness and pain. He has been instrumental in advancing various fields within biological medicine – non-invasive pain management, injection techniques for pain and orthopaedic dysfunction, anti-ageing medicine, toxicology, paediatrics (neuro-developmental disorders), energy psychology, biological dentistry and others. He has also developed Autonomic Response Testing, a comprehensive diagnostic system that has helped many practitioners to become accomplished holistic physicians. He founded Sophia Health Institute in 2012, and is actively involved in patient care at his clinic.