Wagner-Jauregg: Curing Madness with Fever (Malariotherapy) (1927)

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Imagine Vienna at the end of the 19th century. A city of waltzes, of Freud, and of a silent terror lurking in the shadows of bedrooms: syphilis. In those days, this disease was not just an infection; it was a slow and humiliating death sentence. After years of silence, the bacteria attacked the brain, causing what doctors called 'general paresis of the insane.' Patients lost their memory, suffered delusions of grandeur, and ended up as human shells, paralyzed and demented. There was no cure. Asylums were full of these 'living dead' waiting for the end in dark rooms.

In the midst of this setting appears our protagonist, Julius Wagner-Jauregg. He was not the typical psychiatrist who limited himself to listening and taking notes. He was a man of action, with an observation that seemed to defy all medical logic: he had noticed that some patients with mental disorders miraculously improved after surviving an infection that caused very high fevers, such as erysipelas or the flu.

To understand his logic, imagine the brain is a sophisticated computer that has been infected by a devastating computer virus that has completely frozen it. Wagner-Jauregg suspected that fever was not an enemy symptom, but a kind of 'forced system reset,' a controlled fire that burned away the errors but left the hardware intact. For thirty years, this obsessive doctor pursued a radical idea that shocked his colleagues: What if, to cure a mortal disease, we had to provoke another one?

- Syphilis affected 10% of psychiatric hospital patients at the time.
- General paresis was invariably fatal within three to five years.
- Wagner-Jauregg tried tuberculin and vaccines, but the results were not potent enough.

Finally, in 1917, Wagner-Jauregg made a decision that today would seem like something out of a mad scientist movie. Taking advantage of a wounded soldier arriving at his clinic suffering from malaria, he made a historic choice: he extracted the soldier's infected blood and injected it into the veins of his demented patients. He was about to fight one killer with another killer. How is it possible that introducing a parasite that causes chills and extreme fever could restore sanity to a man?

The Great Leap: The 1917 Experiment

That day in June 1917, Wagner-Jauregg was not just injecting blood; he was defying centuries of medical dogma that stated a doctor must only alleviate suffering, never provoke it. He injected malarial blood into nine patients suffering from general paresis. The result was staggering. The patients developed the violent, cyclical fevers typical of malaria, with temperatures reaching over 40 degrees Celsius. But as the fever subsided, something incredible happened: the mental fog of syphilis began to lift.

Six of those nine patients showed significant improvement, and three were able to return to their normal lives, regaining their jobs and families. It was the first time in history that dementia caused by neurosyphilis had been reversed. But why did this brutal method work? The answer lies in the biology of the bacterium responsible for syphilis, *Treponema pallidum*.

The Thermostat Analogy: Cooking the Intruder

To understand the mechanism, think of the syphilis bacterium as an extremely delicate tropical plant. This bacterium is an expert at hiding from the immune system, but it has a fatal weakness: it is highly sensitive to heat. While the human body can tolerate temperatures of 40 or 41 degrees for short periods (however unpleasant), *Treponema pallidum* begins to die at those temperatures. It's as if the body becomes an oven specifically designed to melt the bacteria without cooking the brain.

Malaria was the perfect vehicle for this treatment for three fundamental reasons:

- It causes very high, recurrent, and predictable fevers.

- It was easy to diagnose by observing blood under a microscope.
- And most importantly: we already had a cure for malaria. Once the fever had 'cleansed' the brain of syphilis, doctors administered quinine to kill the malaria parasite, and the patient was left free of both diseases.

A Paradigm Shift in Psychiatry

Before Wagner-Jauregg, psychiatry was almost a contemplative discipline. Doctors classified the insane, listened to them, or locked them away, but rarely 'cured' them with direct biological interventions. Malariotherapy changed this forever. It was the birth of somatic therapy in psychiatry: the idea that the mind can be treated by treating the body.

This discovery earned Wagner-Jauregg the Nobel Prize in Physiology or Medicine in 1927, making him the first psychiatrist to receive this honor. His work demonstrated that the barrier between neurology and psychiatry was much thinner than previously thought. However, it wasn't all glory. The treatment was extremely dangerous. Approximately 15% of patients died from the malaria itself. It was a life-or-death gamble, a therapeutic 'all or nothing' that was only justified because the alternative was a certain and terrible death from syphilitic dementia.

Real Cases and Social Impact

Testimonies from the era are moving. Wives who recovered husbands who no longer recognized them, professionals who returned to their positions after being given up for lost. In an era without antibiotics, malariotherapy spread throughout the world. Even in hospitals in New York and London, 'strains' of malaria were maintained in specific patients just to have blood available to treat new cases of cerebral syphilis.

Final Reflection: From Fire to Penicillin

Malariotherapy reigned for two decades until, in the 1940s, penicillin appeared. Alexander Fleming's discovery made injecting malaria unnecessary, as a simple antibiotic could kill the bacteria without needing to set the body ablaze with fever. Today, Wagner-Jauregg's technique seems barbaric to us, almost medieval, but in its context, it was an act of desperate scientific courage.

Wagner-Jauregg taught us that sometimes the body has its own defense mechanisms, like fever, which we shouldn't always see as enemies, but as powerful allies if we know how to manage them. His story is a reminder that medicine often advances through strange paths, where triumph arises from the willingness to look the horror of disease in the face and seek solutions where no one else dares to look. He left us

a fundamental lesson: madness is not always a mystery of the soul; sometimes, it is just a biological battle that needs a little heat to be won.