



# Syphilisation: Forgotten experiments to treat an awful sickness

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## Abstract

Syphilis was from the 16-th century until the discovery of salvarsan and antibiotics a very dreaded disease. Trials with treatment were however done, among others with mercury, just to cure syphilis. In the middle of the 19-th century syphilisation was introduced as a spectacular method to come to terms with the contagion. The idea was to get a vaccine against the scourge. The trials, mostly done in France and Norway, by inoculation of pus from syphilis ulcers from those who had the illness. In Norway such trials were also done with patients with leprosy. Those with leprosy in this way got a second illness, and they of course became worse. The syphilis patients were declared as cured.

## Background

In the early 1970: s I worked in one of Europe's largest mental hospitals, Beckomberga hospital, in Stockholm, the capitol of Sweden. One of the patients I worked with refused to go to the sauna. He said that the mercury in his body would rise to his head, when the temperature rose. I got a look at his medical journal and noted that he had been threatened for syphilis with mercury. His ideas were not totally absurd because in those days it was believed the mercury would stay in the body [1]. Syphilis was a very dread and wily illness that also fetus could be infected in the womb before or during the childbirth. In any case a cure was urgently needed.

An untreated syphilis goes usually through the following phases, with clinical symptoms alternating with latens periods without symptoms. Infection – Latens- Primary chancre – Latens – Secondary symptoms – Latens – Secondary relapse – Latens – Tertiary syphilis or spontaneous healing. Different people went through the phases with different lengths and severity (2).

## Syphilisation

The experiments with syphilisation started with different kind of observations. A French medicus, Joseph Alexandre Auzias-Turenne (1812-1870), said he had managed to infect apes with syphilis. He noted that when repeating the inoculating of the ape the wounds became less intense. At last no wounds did occur at all and Auzias-Turenne came to the conclusion that the apes had become immune. His idea was to use syphilisation on humans the same way (3).

Another medicus, Casimiro Sperino (1812-1894), worked among prostitutes who due their profession did get exposed to repeated infections. The most experienced prostitutes could come repeatedly to the hospital with fresh syphilis wounds, but were seldom infected with constitutional syphilis. On the other side the girls from the countryside with few wounds were regularly infected on the whole body. Sperino's colleagues had also noted this when examined "public women". Sperino did his first trials with syphilisation in 1851 with great care and decency, as he said. The experiments went on for five months and he inoculated 52 women in this period. All the women had either primary or secondary syphilis. The results did show that the symptoms disappeared and their general condition became better. A few other women, among the prostitutes heard about the good results and came to Sperino and wanted to be cured with this method (3).

Charles-Paul Diday (1812 - 1894) presented his trials with real syphilis vaccinations in 1849. He had the theory that a general protection against syphilis could be made in the same way as the vaccination against smallpox, through injection of diluted secretes directly into the blood vessels. Diday took blood from people with tertiary syphilis with exostoses and gave it to 16 patients with untreated syphilis. After eight months only one of them had developed a general infection (3).

Doctor Philippe Ricord (1800 – 1889) inspired many contemporary specialist doctors when he through systematic and clear setups of the pathology of syphilis could show that syphilis and gonorrhoea were two different diseases. Ricord could also show that syphilis and ulcus molle were not the same (2).

The Norwegian professor, Carl Wilhelm Boeck (1808 – 1875), began his syphilisation of patients in 1852 in Oslo. He had, however, not taken notice of doctor Ricord's study on syphilis and ulcus molle, instead he kept to the theory that they were two different versions of the same disease. He meant that the ulcus molle was a weakened form of syphilis and that inoculation should stimulate the immunity defense so that the more severe syphilis would be prevented. Boeck did syphilise many thousands of patients during his life (2).

Another Norwegian doctor, Daniel Cornelius Danielssen

**Submitted:** 23 July, 2021 | **Accepted:** 19 August, 2021 | **Published:** 23 August, 2021

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**Citation:** Saers KU (2021) Syphilisation: Forgotten experiments to treat an awful sickness. SM J Infect Dis 4: 4.



(1815 – 1894), did some experiments with syphilisation on both those with syphilis and those with leprosy (5).

In Sweden the doctors remained sceptical to syphilisation. Doctor Edholm wrote in his dissertation about syphilis in small children: “to say something definitive about this broad question seems to be too early, due to the treated cases being few. Syphilisation on children is more of historical than therapeutic value.” (My translation). Doctor Edholm was of the meaning that there still have not been any experiments with syphilisation at all in Sweden (6).

But now it is time to move to Paris where the experiments were going on and attracted a lot of international attention and curiosity. A Swedish doctor S. E. Sköldberg was personally present and he reported to his colleagues at home in Sweden via a letter. The research climate and moods are set out in his letter. Today we can see the letter as a real scare. The background was that doctor Auzias said he had combined animal and human trials, meanwhile doctor Ricord was of the opinion that syphilis is

the property of man only.

The letter is presented here in a shortened and modernized version (7, 8).

## Paris 23 October 1851

### Honored colleagues!

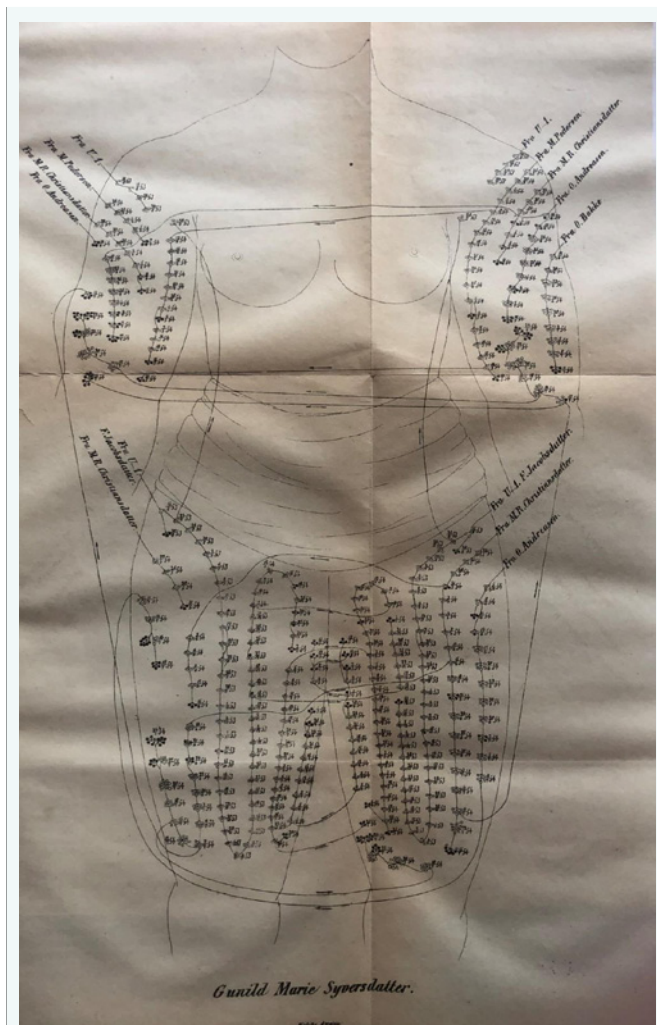
Auzias wanted to develop a vaccine against syphilis. He probably wanted to move syphilis to an animal so that it could be used to vaccinate humans. He had noted that the wounds grew smaller and smaller for each time he vaccinated and at the end the animal became resistant. He also had done research on brothels and among prostitutes. He thought he saw the same pattern among prostitutes. The hostesses, for example, at the Houses of Joy Maisons Tolérées more eagerly employed older and many times infected prostitutes than younger ungraded ones. The older prostitutes got more seldom sick than the younger. Auzias had also met a girl from Dijon who often had been flogged and later on was completely immune to syphilis. Auzias also did other experiments in the same vein but dared not publish his results on humans because he was afraid of getting indicted and be caught by the police.

Last Saturday Ricord told in the lecture that he had met Auzias the day before. The grievances between them had grown more personal and they departed as enemies. Ricord had told Auzias that Auzias was close to a charlatan and his ideas absurd. Ricord used all his resources and eloquence and his spiritual humour when he told that.

Behind me and Nyman a young medical student was seated who since June 27 this year was inoculated by Auzias with 50 -60 chancres. His complete body, breast, stomach, and arms where now covered with scars. The youngster trembled all over his whole body with indignation and vexation. After the lecture Nyman made him go to Ricord and present himself for experimentation. Nyman knew the youngster and during the summer he had many times witnessed when he was inoculated. Auzias had explained the younger was fully syphilised and that nobody could make any new syphilis wound on him

Now it is part of the point that Ricord a long time ago had thrown the glove to anybody who thought of himself immune to syphilis, because he thought that it did not exist. When the youngster came up and offered himself, Ricord at last became serious and decided that the experiment due to next Monday. It did, however, never take place because Auzias never showed up. First after he was promised not to get mocked or offended, especially not by Ricord’s disciple Musée. Ricord promised everything and on Tuesday the feast occurred before an overtly full audience. Auzias with a few words presented his comments and experiences. He not only was sure that his repeated inoculations had generated immunity, but also that the same method could choke both primary as secondary syphilis.

To our great surprise and astonishment, a man in his 50-this showed up. He said he was a doctor by name Chaille or something the like. Five years ago, he had caught syphilis and after some time got secondary symptoms. He had tried to cure himself with



The picture shows the inoculation spots and where the syphilis var came from (3).



potassium iodine but had relapsed and then contacted Auzias who began to inoculate him retrospectively. Chaille had three copper-coloured sores after the last inoculation. He told the secondary symptoms had disappeared completely and now he was at good health and completely syphilised.

The second subject was Laval, a 5<sup>th</sup> grade student of medicine. He had 60 sores and some lesser wounds that were healing. When he four months ago began his service at dr. Puches' department he was bleak and weak. After syphilisation he felt better, got better appetite and grown stronger. Every night he had been together with his Etudiante (temporary sweetheart, my note). She did not show any symptoms and he said he was not afraid to use a woman whose genitals were covered with syphilis scars, even if he himself has scars and broken skin on his penis.

The third subject was a great and hilarious student who on his right arm had a big, three weeks old inoculated hard chancre and on his left arm there was a well-treated four days old var filled bladder.

Three syphilis cases with syphilitic var were also present. The first had a diminishing sore on his knee after an earlier inoculation. The second had a stinking sore that seemed to be healing and the third a sore on his foreskin. Chaille and Laval each got some inoculations from these sores. They were covered with glass as is the usual case. The third person had to wait until his youngest sore had grown bigger.

Already yesterday Auzias said that none of the cases will develop sores and that Ricord in the early morning had been to Laval. Today we again gathered to see the result. In his lecture Ricord seemed to have planned some kind of pontoons for a retreat but everything developed more complicated than so. He does not believe the var last Tuesday was inoculable. On Chaille no sore had developed, but he was not present. On Laval small red marks could be seen, but that was all. Everything is now postponed to Saturday so as to see the development and to get var that was useable for inoculation.

On Tuesday also the college Auzias was present and participated with lively interest. Now he has departed for home and will on his arrival in Stockholm talk about this and its dramatic accessories. We try, of course, to keep neutral and only observe without prejudice or preconceived notions. But it cannot be denied that everything looks strange. On Saturday we can see what it can become.

### **Saturday 25 October**

I take my pen again to tell what happened by Ricord today. Laval who got six inoculations in three different sores was completely healed. He had no sores. Ricord did not think the poison used had been strong enough and Auzias and Ricord agreed to inoculate Laval from a person with a whole and beautiful syphilis sore. On Tuesday Ricord will inoculate Laval on the best place he can find, the foreskin and the glossy part of the penis. The youngster was happy as a musician that Ricord got "ants in his head" and he was such a fish for him to cleanse. Dr. Chaille did not show up but Ricord confessed that nothing worked on him.

That gruesome poison is now handled like a still drink and young doctors show up like growing mushrooms to present themselves as guinea pigs for these experiments. Today a new doctor called Lindeman, probably a German but practicing here and Ricord inoculated him in his left arm and on his penis. He told he had earlier inoculated himself ten times, but I don't know if he thought he was enough syphilised.

To Auzias's lecture last Tuesday I must complete with his tale about an inoculation of a lady with syphilis and cancer who afterwards developed a cancer that was milder and better. But the inoculation had developed to a stinky and ongoing gangrene, and he had not dared to follow up his experiments. How this will develop is still impossible to tell, but Ricord for sure has begun to speak about refracts and idiosyncrasy, something he earlier didn't believe about syphilis.

Ricord's lecture room is every day completely full and, in the house, they are close to suffocating each other. Nyman and I had to take seats 45 minutes before the beginning of the lecture.

### **Norwegian experiences**

Now we can let some Norwegians rise from their internments to tell how the experiments developed.

Professor Boeck at the Norwegian University in the capital city presented 21 patients with syphilis in the years 1852 – 1854 (3).

The Chief physician Danielssen also began to syphilise patients with syphilis and leprosy. He reported a total of 48 syphilised patients, 25 with syphilis and 23 with leprosy. The inoculations lasted for the years 1856 to 1857 and occurred at the hospital of the Bergen region and at a hospital specialised in leprosy. His conclusion was that syphilisation worked well on syphilis but was maleficent for leprosy (5).

My work on the material from the two medicals show the patients being of age from 0 to 67 years, with a median age of 24 and an average age of 26 years. No age was given for one patient. About 54 % of the patients were women and 46 % men. Nearly half the syphilis patients had been treated earlier with mercury. The total of inoculations for each patient varied, but among professor Boeck's patient some got over one thousand. Chief physician Danielssen's patients got normally 540 with a maximum of 922 inoculations. The experiments lasted between 3 and 28 months, on average in less than 8 months. The patients treated by dr. Danielssen had syphilis or leprosy for 3-12 months, on average 6 months. Professor Boeck does not report any corresponding data. According to dr. Danielssen all but one who died were discharged of the syphilis patients and handled as cured. Professor Boeck discharged 14 as cured, 5 relapsed and got more syphilisation medication. One patient who relapsed was treated without improvement. None of the patients died, however (3, 5).

Regarding Dr. Danielssen's leprosy patients the results were discouraging. No patient could be discharged except one who was discharged due to the wish of his parents and one who died. Three patients showed improvements although the illness was





constant. Twelve patients got worse leprosy, two even in a high degree. Most serious affected were those with knotty leprosy but even those with speckled leprosy were worse (5).

### Case report from professor Boeck

The 20<sup>th</sup> observation. The maid, Gunild Marie Syversdatter, was 30 years old when she arrived at the hospital on October 8<sup>th</sup> 1852. She had a constitutional syphilis that already had been treated many times with different anti syphilitic mixtures like mercury and iodine potassium. Recidiv occurred and she had got high doses of iodine potassium but still her condition worsened all time and after that syphilisation began on arriving at the hospital she was very swollen on the lower part of her nose and she had many rounded deflections so closely spaced that no art of her skin was free from them. On a few places the deflections had loosened the skin was very red. All her body skin was rather swollen and she also had a few isolated tubercles. From her nose wing to her cheek there was a rounded sore, clearly outlined and with yellowish green secret. Around them the skin was red as copper. Gunild was earlier treated at the same hospital for big purulent wounds, extensive eczema over all of her body and in her throat. She was also anemic. The treatment consisted of mercury and potassium iodine. Before the syphilisation Gunild also got a swollen gum and the sores on her legs grew bigger and she complained of pain in her right leg. She really wished to get syphilised. A verdict was sought from different persons named (3).

On August the 10th 1853 the syphilisation began and was completed on July 26 1854. Because the syphilisation was done on Gunild's own wish it endured for an unusual long time according to professor Boeck. The patient also showed great patience. Every month she got inoculated for 8 to 25 days and with 1 to 5 inoculations every day. In total she got treated in 150 days. When Gunild was discharged her general health was much better and she was satisfied with the treatment (3).

### Case reports by the Chief physician Danielssen

#### Patient with leprosy

Ole I. was only 9 years old when he arrived on May 14 1853. He was of average length and had plenty of hair. His complexion was even and tanned brown. On a few places he had rather hard knots that were lead colored. He also had some knots concentrations on his upper arms outside, on his thigh and his left knee. He had never felt any pain and he didn't know about

any cases of leprosy in his family. Besides leprosy he had mange and prurigo from which he was relieved at the hospital. After some time, the leprosy knots abated and he began to look better. He degraded, however, in November and he complained about affliction in both arms and hands. In January it seemed the illness became worse and new white areas appeared on his cheeks. The syphilisation went on for seven months and Ole received in total 341 inoculations. He could not be discharged from the hospital and condition had worsened with growing aesthesis (5).

#### Patient with syphilis

Little Peder Olay S. was 2 years old, and was hospitalized on September 20<sup>th</sup> 1856. His mother had got syphilis about a year earlier when she wet nursed someone else child. She had syphilitic wounds on her left breast and Peder Olay had about the same kind of sores in his pharynx and on both cheeks. Due to constant diarrhea and sores on his anal the child looked very emaciated. The first inoculations took place in September and went on until April the following year. In total he got 190 inoculations. On April 30 he was discharged from the hospital.

After the 1870s, syphilization was relegated to medical history.

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