

# Persistence of Non-Specific Syphilitic Test Titers for 6 Years After the Adequate Treatment

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## ABSTRACT

Syphilis is a great imitator. The incidence of syphilis once again in an increasing trend throughout the globe. Even though, it is a curable bacterial infection, the exact cure cannot be established as the *Treponema pallidum* is not growing in culture media of laboratories. It can be cured to the presumptive point. The markers of this presumptive cure, the fall in the quantitative nonspecific serological tests for syphilis, also lead the clinicians in a dilemma and left in a blunt end. Such a case report of a late latent syphilis who was having a reactive persistent titer of Rapid Plasma regain test for syphilis even after the repeated recommended anti-syphilitic treatment for more than 6 years. It is a sample only. Many clinicians across the world are facing such situation. It is high time to revise the guidelines to have a definite marker of cure in cases of syphilis.

**Keywords:** Specific Serological Test, Nonspecific Serological Test, Persistence of Titer, Anti-Syphilitic Treatment.

After the Covid 19 epidemic the whole world is experiencing an upsurge in the incidence of STIs, especially with an increased incidence of syphilis [1]. Syphilis can be treated and a presumptive cure is attainable as per King and Nicol [2] as we are not able to culture the *Treponema Pallidum* till date and the as there is no test for cure. The response to treatment is predicted by the fall in titer of the nonspecific serological tests for syphilis like VDRL and RPR tests. The specific *Treponemal* Antigen tests remain positive for ever, even after the adequate treatment. But nowadays I am observing the persistence these titers of nonspecific tests also for years with many patients. Nonspecific titers will become nonreactive within 6-9 months in cases of early syphilis and within a year or two in cases of late syphilis. The four- fold decrease of the titer of the nonspecific tests following the adequate treatment within a year or two taken as a proof of a cure [3]. Persistence of the titers of nonspecific syphilitic tests in low titer after a four-fold fall in titer for years is an accepted one and called as either serological scar or sero-fast [4,5]. But when these nonspecific tests were persisting in the same titer or more, for years, it will be very difficult to convince these patients and referring doctors of other specialties. Moreover, patients experienced difficulties during immigration for the job opportunities in Gulf countries. Herewith I am describing a case report in whom the titer was persisting for more than 5 years along with a study of my patients.

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## CASE REPORT

31 years married male patient was treated by a Dermato-venereologist for genital chancre with RPR reactive one in 4 dilutions during May 2018 with capsule Doxycyclin 100 mg twice daily for 2 weeks. His wife was reactive in 32 dilutions and she was also given the same treatment. After healing of the genital sore, Patient and his spouse were reviewed during June 2018 and found no changes in titer. So, the treating dermato-venereologist instituted Injection Benzathine Penicillin LA 24 lakhs units, statum dose for both husband and wife. During January 2019, both were seen by me without any symptoms pertained to Syphilis. At that time husband was reactive in 32 dilutions and wife was reactive in 8 dilutions. Both were nonreactive for HIV. Their two children born to them also were nonreactive for syphilis. They were labeled as Late latent syphilis as the patient was promiscuous for more than 5 years before his marriage and were given Injection Benzathine Penicillin LA 2.4 Megaunits after test dose in weekly interval for 3 weeks. Both were reviewed on July 2019 husband reactive in 16 dilutions and the wife was in 8 dilutions. This time both were treated with Capsule Amoxicillin 3 gm daily (1 gm thrice daily) along with probenecid for 30 days [7]. Both were reviewed during January, 2020 found, husband reactive in 8 and his wife nonreactive. Patient was reviewed February 2024, found RPR test reactive in 16 dilutions and the wife is nonreactive. Another woman who had tried with Benzathine Penicillin, Doxycyclin and Injection Ceftriaxone was having persistent RPR titer crossed 6 years [6].

### Other Observations

Similarly, since 2019 onwards, 81 cases of syphilis patients were seen by me in my OPD. Among these 81 cases,

4 cases of Primary syphilis, 1 case of multiple chancres,

4 cases of Secondary syphilis with healing Primary Chancre,

14 cases of secondary syphilis,

7 cases of Early latent,

46 cases of Late Latent

4 cases of mixed infection

one case of late syphilis (Posterior Uveitis) were observed.

One case biological false positive was present where the specific test ruled out the possibility of Syphilis.

Among these 8 cases were reactive for HIV (Two were reactive both for HIV and HBV)

Among these 81 cases, 12 were females, others were males (No transgenders).

All my patients were primarily treated with Injection Benzathine penicillin and hypersensitivity to penicillin were not observed with any of these patients in this series.

11 individuals were revealed with symptoms of Jarisch Herxheimer reactions.

Among these 81 cases, 23 patients (treated prior to March 2023) came for serological follow ups after 6 months. 14 patients came for two follow ups and 9 came for more than 2 follow ups. Among these 23 patients came for serological follow ups 9 attained nonreactive titers either within 6 months or within 18 months, two were found to have reduction in the titer, whereas 12 were having persistent serology without any fall in titer. 4 were having this persistent serology remaining for more than 18 months.

Apart from these cases, during the 15 years duration, I had seen such cases of persistence RPR titer for more than 2 years more than 10 cases [6]. Almost all these patients tried also with drugs other than Penicillin in addition to the recommended Penicillin treatment. Fortunately, to my observation, none had gone for either progress of the disease or not transmitted the disease either horizontally or vertically. Another interesting finding is almost all the patients in early stage of syphilis responded serologically well to the treatment and this type of persistence in titers were found only with individuals with late syphilis.

## DISCUSSION

When a disease has no test for cure, when it can be treated to the presumptive point of cure, and in the presence of persistent specific test even after the complete recommended treatment as per guidelines, the four-fold fall in the titer of nonspecific syphilitic test is the only proof for the success of treatment. Even in the absence of this inference, it will be very difficult to convince the patient (who is already was upset and depressed because of STI and owing to the family responsibilities and care for their near ones and owing to the stigma attached to these diseases) or the referral health care providers of various specialties, especially in the presence of some other comorbidities affecting the central nervous system, cardiovascular system, eye and ear problems etc.

## CONCLUSION

At this juncture, it is high time to arrive at a new test for syphilis to follow the prognosis or to reconsider for a better treatment option or a consensual guideline to the treating physicians confidently to arrive at solid decision about the cure for syphilis. Then only Patients can be convinced and the referral clinicians can be convinced.

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