

Persistence of syphilitic serology in late syphilis even after the recommended treatment

Abstract

180 cases of reactive serology for syphilis were encountered during a period of eight years. Incidence of biological false positive was 8.8%. Among the treated, 155 were in late syphilis. Two patients dropped out from treatment. 56 were not turned up for follow up in the treated group. Only 15 among the 97 treated and followed up patients had attained sero-reversion or a response to treatment. Remaining 82 (84.5%) patients were having persistent reactive serology of syphilis for more than a year after completion of treatment. This evoked a great concern among the patients and the assurance given by the physician fails to satisfy. This brings a question whether the treatment is adequate?

Keywords: reagin test, late latent syphilis, penicillin

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Murugan Sankaranantham

Department of Dermatology, Venereology and Leprosy, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, India

Correspondence: Murugan Sankaranantham, Department of Dermatology, Venereology and Leprosy, Sree Mookambika Institute of Medical Sciences, Kulasekharam, Kanyakumari District, Tamil Nadu, India, Tel + 91 9443257994, Email murugan2mala@gmail.com

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Introduction

Syphilis can be treated to the point of presumptive cure as there is no test for cure.¹ Penicillin is considered as the drug of choice as per various guidelines.²⁻⁴ Following the appropriate and adequate treatment, the non-treponemal test (VDRL, RPR) titer has to come down either to non reactive or attain a low titer within 3-6 months in case of early syphilis and within a year or more in case of late syphilis⁵. Titer in late syphilis in some patients may remain unchanged for longer time. This will evoke a lot of anxiety and mental disturbance among these individuals with syphilitic serology positive. This has to be given most importance and patient needs more assurance and the physicians are yet to understand more on the reactive pattern of non-treponemal test in these regards, as it is an already known entity that the persistence of reactive specific treponemal tests till lifelong. At this juncture, STD physicians are put in a dilemma in convincing their patients and relatives and the referral doctors to proceed with management of cardiovascular, central nervous system problems and ophthalmic conditions and also in situations of medical checkups for immigration purpose. This study emphasizes these points.

Material and methods

180 cases of sero-reactive for Syphilis were encountered in my outpatient clinic and also in a tertiary care hospital during a period of January 2010- December 2017. All patients were screened for HIV and Diabetes mellitus. RPR test and TPHA tests were done to all. Biological false positive were eliminated from the study. Others were treated as per recommendations according to their stages of Syphilis. Partners also traced and treated wherever it was possible. Regular follow up were done by examination and with serological investigations once in every 3 months up to 1 year or more, then once in every 6 months in patients with 2 years after the treatment in some cases up to more than 5 years.

Observations

Among these 180 cases of reactive syphilis 111 were men and 69 were women. 16 cases of biological false positives (8.8%) were identified with the help of specific test and syphilis was ruled out in these cases. Among the remaining 164 cases (101 were male and 63 were female), only nine (5.5%) had early syphilis (2 were in primary stage and 7 were in secondary stage) and they all were men.

These nine men with early syphilis were treated with a single dose of Injection Benzathine Penicillin 2.4 million units intramuscularly and all were responded well. Rapid plasma regain titer returned to become non reactive within 3-6 months in all cases.

Among the remaining 155 (94.5%) cases of late syphilis, 5 (3%) had manifestations (four had CVS syphilis and one had optic syphilis) and others remain in late latent stage. Except two, all were treated with Injection Benzathine Penicillin 2.4 megaunits weekly once for 4 weeks. Two dropped out from treatment which included an aneurysm case. Among the 153 treated for late or late latent syphilis, 56 were not turned up for further follow up and 97 cases were on regular follow up. Among these, 4 were also reactive for HIV and 4 were having Diabetes Mellitus. These 97 cases treated for late syphilis and late latent syphilis were asked to report regularly once in three months for a year or more. Among these only fifteen (15.4 %) were responded to antisyphilitic treatment and got a sero-reversal either to a low (4 fold decline) or a nonreactive status. Remaining 82 cases (84.5%) among the follow up group were remaining reactive for syphilis without any change in the syphilitic serology for more than one year even after the recommended appropriate antisyphilitic treatment. More than 16 patients were remaining in the same titer even 5 years after the treatment and in three patients had a rise in titer (one tube) after treatment. This included two patients with Diabetes Mellitus.

| Total cases of syphilis | | | Early syphilis | | | Late latent syphilis | | | Late syphilis | | |
|-------------------------|--------|-------|----------------|--------|-------|----------------------|--------|-------|---------------|--------|-------|
| Male | Female | Total | Male | Female | Total | Male | Female | Total | Male | Female | Total |
| 101 | 63 | 164 | 9 | nil | 9 | 87 | 63 | 150 | 5 | 0 | 5 |

| Cases treated | Drop out | Cases in follow up | Responders to treatment | Persistence of serology |
|---------------|------------|--------------------|-------------------------|-------------------------|
| 153 | 56 (36.6%) | 97 (63.4%) | 15 (15.4%) | 82 (84.5%) |

Among these 82 non-responders, 17 were also tried with additional treatment regimen. Injection Procaine penicillin 12 lakhs units IM daily for 21 days with 8 patients, Injection Benzyl Penicillin G 10 lakhs units twice daily as IM injections for 21 days with four patients and five were tried with Capsule Doxycyclin in the dose of 100 mg twice daily for 30 days without any improvement in the serological titer. Fortunately none of these patients had gone to any late manifestations of either benign tertiary or CNS, CVS syphilis, although some had already coincidental heart diseases like coronary artery disease.

Discussion

Most of these late latent cases were referred from cardiology, surgery and obstetric departments after found out the reactive syphilitic serology while routine pre-surgical, antenatal or pre procedural screening and also during the immigration check up during migration to Gulf countries for job purpose. In late syphilis, serological tests after treatment rarely help in indicating the prognosis.⁵ Serological tests are likely to remain positive indefinitely after adequate treatment in more than 50% of cases, although in most of them there is some reduction of quantitative titer as per King, Nicol and Rodin.⁵ A rise in titer indicates a likelihood of relapse and need for further treatment. In my series nearly 84.5% among the treated late syphilitic and late latent syphilis were not showing any fall in titer. Treponemal test (Specific test for Syphilis) also would remain reactive for life-long in almost all patients even after the completion of treatment. It is very difficult for the patients to accept the doctor's assurance that in their cases, positive test are of no significance and need no further

treatment. Certain unanswered questions remain in the management of syphilis like whether the late syphilis got cured completely or not, whether there is difference in strains of Treponemes, whether there is difference in host response or is there any resistance of Treponemes to Penicillin? Do they really need a hike in dosage than what the guidelines recommend? Though many centers experience similar problems in the management of syphilis, this problem had not been reported. 97 late and late latent syphilitic patients who were in this follow up, constituted a very small group and it is the limitation for this study. We need more multicentric larger studies to get more solid results in this regards and also trial with other antibiotics like Injection Ceftriaxone.

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Conflict of interest

Author declared there is no conflict of interest in publishing the article.

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