

Penicillin is drug of Choice for Syphilis- Still it holds good?

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ABSTRACT: *Syphilis resistant to Tetracyclins and macrolids had well documented. Penicillin is still considered as drug of choice in the treatment of Syphilis. Treponemes resistant to Penicillin are yet to be documented. In a private STD clinic of Tirunelveli, South India, during the period of January 2010 to June 2015, 68 cases reactive for syphilis were noted. 13.2 % of false positive were identified. Remaining 59 cases, 31 lost for follow up after treatment. Among whom 12 responded well to treatment following anti-syphilitic treatment with Penicillin whereas 16 (57.14%) remained reactive for more than a year or more. The titers either persist as same or even go up. Nobody in this group are reactive for HIV. All these patients remain in latent state in this series. Nobody progressed to neuro or cardiovascular syphilis. This warrants that it is high time to look for some other better alternative to treat Syphilis or otherwise increase in the dosage may have to be considered. Even though this study comprises of small number of patients, it has to be studied in detail for a longer period at multiple centers.*

Key words: *Treatment resistance, management of Syphilis*

I. Introduction

Resistance of *Treponema Pallidum* to Tetracyclins and Macrolids is a known entity^{1,2}. As per Centers for Disease Control, Atlanta and World Health Organization guidelines still Penicillin stood the choice of treatment³. Injection Procaine penicillin is recommended for the treatment of Neuro-syphilis which was not available freely in the market. Especially Penicillin is the drug of choice in preventing the Prenatal Syphilis^{3,4}.

Material Methods:

68 patients referred to Private clinic of a STD specialist with a reactive serology for syphilis from Obstetricians or for immigration clearance due to reactive syphilitic serology during a period of January 2010- June 2015. All these individuals had once again verified with Rapid Plasma Reagin test (RPR), HIV rapid test and *Treponema pallidum* Hemagglutination test (TPHA). Confirmed patients were treated with Injection Benzathine penicillin 2.4 million units intramuscularly weekly once for 4 weeks as they were in late latent stage of syphilis. The patients were instructed to be in the follow-up with a quarterly blood analysis.

II. Results:

A total of 68 cases were found to be reactive for Syphilis. 58 (85.29%) were males and 10 (14.7%) were females. Most of these cases were either referred from Obstetricians or found to be reactive during immigration clearance for job at Gulf countries. Biological False Positive was present with 9 (13.2%). They were non-reactive for Specific test (TPHA). Remaining 59 cases were reactive for both specific and non-specific tests (86.76%). Majority of these patients (> 90%) were in late latent stage (Asymptomatic). No single case had any syphilitic manifestation. No one was reactive for HIV. 4 were having Diabetes Mellitus (uncontrolled). All the 59 were treated with Inj. Benzathine Penicillin 2.4 mega (million) units weekly once for 4 weeks. All had completed the treatment properly. Partners also treated simultaneously or epidemiological dose was given, if spouse nonreactive for Syphilis. 31 (52.54%) were not turned up to further follow up in spite of specific instructions. Remaining 28 cases (47.45%) had been followed up regularly at intervals of 3 months for a year or more. 12 (42.8% among the followed up group) responded to treatment and attained non-reactive titer within 6-9 months. 16 (57.14%) remained reactive for more than a year without any drop in the titer. 3 patients were found to have rise in titer (1-2 tubes). Among these 16 who had not responded, were treated further with either Procaine Penicillin 12 lakhs daily (earlier cases) for 3 weeks or Inj. Benzyl Penicillin 10 lakhs twice daily for 21 days (with recent cases), if their titer remained unchanged for 9 months. 12 were still in the follow up for more than a year without any fall in the titer even after treated with either procaine or crystalline Penicillin. Some remain reactive for more than 2-3 years. Their response to Cap Doxycyclin was also poor in most of these cases.

III. Observation

Fortunately none of these patients had gone to any neurological or Cardiovascular complications due to either Neuro Syphilis or CardioVascular Syphilis although some of them had already few cardiac problems like coronary artery block. They were all non-reactive for HIV.

IV. Discussion

Treatment failure of Syphilis with Penicillin had been reported in cases of HIV disease^{5,6}. But there is no report available as cases of penicillin resistance in Syphilis in the absence of HIV. The efficacy of 3 g oral amoxicillin plus 750 mg probenecid daily for 2 weeks of treatment recommended for early syphilis and a 4 weeks of therapy with the same dose for patients with late latent syphilis and also for syphilis of unknown duration have to be evaluated further⁷.

V. Conclusion

This warrants that it is high time that we should look for some other better alternative to treat Syphilis or otherwise increase in the dosage may have to be considered. This study comprises of small number of patients, it has to be studied in detail for a longer period at multiple centers.

The efficacy of 3 g oral amoxicillin plus 750 mg probenecid daily X 2 weeks of treatment recommended for early syphilis and a 4 weeks of therapy with the same dose for patients with late latent and syphilis of unknown duration. 89.3% of these patients were successfully treated⁷. This alternate choice has to be evaluated in future for these penicillin failure cases.

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