Dilemmas in the Management of Syphilis

Abstract:
E Muldoon, F Mulcahy
Department of Genitourinary Medicine and Infectious Diseases, St James’s Hospital, James St, Dublin 8

A recent US survey demonstrated wide variation in the management of syphilis. 25/34(73.5%) Consultants and Specialist Registrars in Infectious Diseases and Genitourinary Medicine, in Ireland were surveyed. 22(66%) treat more than 50 HIV patients a year, 18(72%) had been consulted on a patient with syphilis in the last year. With secondary syphilis, 13(52%) give 3 doses of benzathine penicillin, while 10(40%) give one, no statistical difference between consultants and SpRs (p=0.9). Significant variation in the investigation and management of syphilis in Ireland was identified. There is a need for the development of Irish national guidelines on the management of syphilis.

Introduction
Controversies exist in the assessment and treatment of patients with syphilis. Much of the discrepancy in opinion arises from the lack of large clinical trials, leading to portions of the guidelines being based on expert opinion. International guidelines differ. A recent US survey of the investigation and assessment of patients diagnosed with syphilis demonstrated a wide variation in practice amongst US based infectious diseases practitioners.

Methods
A modified version of the survey used by Dowell et al4 (personal communication Dr. Deborah Dowell, Centers for Disease Control and Prevention) was used to survey 9 Infectious Diseases (ID) consultants and 3 Genitourinary Medicine (GUM) consultants and 22 Specialist Registrars (SpR).

Results
25 of 34(73.5%) physicians surveyed responded. 10(40%) were consultants. Similar to the US survey the majority 19(76%) of respondents had treated between 1 and 20 patients with syphilis in the last year. 23(92%) of respondents stated that they had treated more than 50 patients with HIV in the last year and 16(64%) treated between 1 and 20 patients with gonorrhoea infection. 18(72%) had been consulted on a patient with syphilis infection in the past year. 17(68%) of respondents said that darkfield microscopy was available to them and that they used it, and the same percentage said that darkfield microscopy is essential to the treatment of primary syphilis. 13(52%) stated that they would treat presumptively and send an RPR in the case of primary syphilis. 13(52%) stated that they would treat presumptively and send an RPR in the case of secondary syphilis in a HIV positive patient with three doses of Benzathine penicillin, compared to 10(40%) who give one dose. This did not vary significantly between consultants and SpRs(p=0.9). Unlike the US survey treatment of a patient with secondary syphilis did not significantly differ between practitioners who had seen less than five patients with syphilis in the last year and those who had seen more than five patients(p=0.2).

Irish respondents again differed to their US counterparts when asked what was the lowest RPR they were willing to follow (i.e. retest periodically without re-treatment or lumbar puncture) post treatment in patients reporting no re-exposure. 10(40%) of respondents were willing to follow a titre greater than 1:4 in HIV negative patients while 12(48%) would follow the same titre in HIV positive patients p<0.001, a trend reserved from the American findings. When it came to the issue of lumbar puncture to investigate asymptomatic HIV positive patients with syphilis, 16(72%) would perform a lumbar puncture in a patient with an RPR of 1:32 with a CD4 count of 150 cells/L while 44% would if the patients CD4 was 550 cells/L. This did not vary significantly between consultants and SpRs(p=0.2).

17(68%) responded that they had treated a penicillin allergic patient with syphilis, 16(66.7%) recommended penicillin desensitisation, however only 7(23%) stated that desensitization was always done and practical reasons were the most frequent response for why desensitization was not always done. 9 respondents did not answer the questions on alternative therapy in penicillin allergic patients, of those who did answer, 12(67%) would use tetracycline therapy.

Discussion
This survey of specialists of infectious disease and genitourinary medicine highlights the variation in practice that occurs in the management of syphilis in Ireland. This mirrors the similar variation seen amongst American practitioners. The response rate of the survey was excellent, likely reflecting the fact that the ID/GUM community in Ireland is small, and reminder emails were used to remind physicians to complete the survey. It is unusual that 68% of respondents stated that darkfield microscopy was available to them and that they used it, given that St. James’s and the Mater Misericordiae Microbiology departments are the only centres performing the test. An unusual finding was that practitioners were more likely to follow a higher RPR in treated HIV positive patients without re-exposure than in HIV negative patients. This is an opposite trend to that seen in the US study. The fact that no difference was seen in treatment practice amongst those who had seen smaller numbers of syphilis patients compared to those seeing larger numbers likely represents the smaller sample size of the Irish survey.

The fact that the large number of practitioners who recommend penicillin desensitisation do not always see the procedure done is disappointing, as this would be best practice in the treatment of a penicillin allergic patient with neurosyphilis.

The wide variation in clinical practice is likely due to the absence of evidence-based guidelines on the assessment and treatment of syphilis. In addition the development of Irish national guidelines might contribute in some way to the standardisation of syphilis therapy in Ireland.

Correspondence: E Muldoon
Department of Genitourinary Medicine and Infectious Diseases, St James’s Hospital, Dublin 8
Email: eavan@esatclear.ie

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References