Background

General Practitioners (GPs) in Lothian, Edinburgh are currently requesting syphilis serology in 65% of individuals being tested for HIV. Requesting syphilis serology to the remaining 35% would add significant cost, around £7000 per annum. At the Edinburgh centre, full serology for syphilis (IgG, RPR, TPPA, IgM) is performed on all those with a previous syphilis diagnosis. We also provide lifelong 6 monthly monitoring of people living with HIV. Many of these patients have had prior syphilis and therefore all four tests are repeated on each occasion, a very labour intensive process. Many of these individuals are not at ongoing risk of infection.

At the Edinburgh centre full serology for syphilis (IgG, RPR, TPPA, IgM) is performed on all those with a previous syphilis diagnosis. We also provide lifelong 6 monthly monitoring of people living with HIV. Many of these individuals have had prior syphilis and therefore all four tests are repeated on each occasion. Some are not at ongoing risk of infection.

The Edinburgh protocol also recommends following up patients with positive serology as follows: Early: 1/3/6/12 months, 6 monthly until RPR serofast. Late: 6 monthly until serofast. These patients receive all four serological syphilis tests on each occasion.

Methods

One hundred individuals with full serological testing for syphilis between 30/9/15 and 29/10/15 were surveyed. Age, risk group, HIV status, stage of infection, treatment received, symptoms at presentation, follow up results were noted. Those with false positive results were omitted from further analysis. Results for contacts of syphilis, those treated epidemiologically and results of treponemal PCR (when taken) were collected.

Results

Age range was 20-77 years. Eighty eight per cent were male, 12 female. Seventeen individuals were heterosexual (12 false positive), 83 MSM (1 false positive).

Twenty one individuals had evidence of early infection (all positive RPR), 4 re infection (all rise in RPR), 7 late latent infection and 54 results in keeping with treated infection (Chart 1).

Twelve patients were symptomatic of syphilis. Those with false positive results were omitted from further analysis. Forty seven (54%) were living with HIV. Of these 23 (48%) had no documented ongoing risks for syphilis, acquisition and 16 (34%) had ongoing risks but a longstanding RPR 0. When symptoms and previous testing were taken into account, 4 had early syphilis (2 PCR positive), 2 re infection, 2 late latent infection.

Forty (46%) were HIV negative. Of these 16 (40%) were MSM with previously treated syphilis, and a longstanding RPR 0. Seventeen (42.5%) had early syphilis (16 MSM, 1 female, 3 PCR positive) and were being monitored as follow up. Five (12.5%) had serology suggestive of late latent syphilis, with RPR 0 at treatment. Two MSM had evidence of re infection (RPR 32 and 64).

Discussion

The audit showed that 13% of results were false positives. It was agreed that these all require full serological follow up 2 weeks following initial testing. The Edinburgh laboratories reported that a new IgG test is being introduced (Abbott TP) which may lead to a decreased number of false positive results.

Summary: All early syphilis, re infection and contacts of syphilis continue to require full serological follow up and full serology is required to assess response to treatment, especially as follow up success varies. It was felt that 1 month and 1 year follow up should be particularly emphasised. However, RPR alone is sufficient for screening for re infection in those with a history of previously treated syphilis.

References

1. BASHH UK National Guidelines on the management of syphilis, 2015

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Chart 1:

- Early infection
- Reinfction
- Late latent
- Treated infection