P42 AN AUDIT OF *NEISSERIA GONORRHOEAE* DETECTION METHODS IN A DISTRICT GENERAL HOSPITAL GENITOURINARY MEDICINE SERVICE

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Background This service is located in a large district general hospital bordering a large UK city. It was noticed over a short period that there were several discrepant results returned for detection of *Neisseria gonorrhoeae* (GC) using PCR technologies and traditional culture.
Aim We performed a 3-month look back at all samples sent for GC detection, in order to define local incidence of GC and discrepant results.
Methods All samples sent over the preceding 3 months from this service, either as local testing or as part of the national programme, were identified using computer records and then recorded into an excel spreadsheet for comparisons (see abstract P42 table 1).
Results 1245 cases were identified during the 3-month period. The total number of cases with at least one positive GC result from culture and PCR was 41 (3.29% of tested). 902 patients (72.5% of those tested) had samples sent for culture. Culture was on vancomycin-colistin-nystatin-trimethoprim enriched agar. 24 (2.7%) were reported positive for GC. There was a total of 1225 PCR based tests collected between the local and national programmes (98.4% of all cases). Abstract P42 Table 1 shows the specific methods of these two programmes. Of the 1225, 39 tests were positive (3%). All cases with a positive result were then further analysed. 27 had concordant results, that is, either the culture and PCR matched, or only one of the two tests was performed. This gave 14 patients with discordant results (1.1% of all tested, 34% of all positive results). 13 cases had a positive PCR but negative culture (93%), and one patient had a positive culture but negative PCR.

Abstract P42 Table 1 Comparison of programme and methodology for GC collection

Programme	Site of collection	Collection kit	Machine for analysis
Local	Urethra or endocervix	BD Probetec	BD Viper
National (R U Clear)	Urethra (urine)	Aptima combo	Genprobe Tigris

Discussion The overall numbers are too low for accurate statistical analysis, but our incidence of GC is around 3%. PCR detected many more cases than culture would alone, although there was a single case of culture positive and PCR negative. We plan to perform a 1-year analysis to obtain sufficient cases for statistical analysis.

Bacterial STIs

P43 RPR TITRES FOLLOWING SYPHILIS TREATMENT: DOES HIV STATUS AFFECT THE MAGNITUDE OR RATE OF RESPONSE?

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Aims Co-infection with HIV has been shown to alter the serological response to, and the course of, infection with *Treponema pallidum*. We aimed to determine whether the rate or magnitude of response to treatment, as measured by falling Rapid Plasma Reagin (RPR) titres, was different in HIV positive compared to HIV negative patients in the modern era.
Methods A retrospective case note review was undertaken of patients who were diagnosed with syphilis between 1 January and 31 December 2008. The change in RPR titre at 1, 3, 6 and 12 months post-treatment was determined. Statistical analysis was performed using Microsoft excel; p values were calculated using χ^2 or Student t test.
Results During the study period, 57 HIV negative and 23 HIV positive patients were diagnosed with syphilis. Of the patients with a RPR titre greater than neat at diagnosis, 30/40 (75%) HIV negative patients and 12/15 (80%) HIV positive patients showed a two dilution or greater fall in RPR titre 3 months following treatment (p=0.72), with 36/39 (92%) and 16/16 (100%) achieving a two dilution drop by 6 months, respectively (p=0.24). There was no significant difference in the median RPR titre at diagnosis between HIV positive and negative patients at all stages of syphilis infection. 3/16 (19%) HIV positive patients and 3/38 (8%) HIV negative patients, who were not thought to have been reinfected, continued to have a RPR titre of 1:16 or greater at 6 months post treatment (p=0.26). Where data were available, all these patients achieved a RPR titre of less than 1:16 by 12 months post treatment. Two patients, both HIV positive, were re-infected during the study period, one patient being re-infected twice.
Conclusions Overall, treatment appeared to be effective and the majority of patients showed a two dilution or greater fall in RPR by 6 months post-treatment. There was no significant difference in the rate or magnitude of response in HIV positive compared to HIV negative patients.

P44 AN EVALUATION OF GONOCOCCAL TESTING USING A ROCHE COBAS PCR PLATFORM IN A LOW PREVALENCE AREA

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Background The countywide sexual health service have recently adopted the roche cobas dual PCR for gonorrhoea testing. The locality has a low prevalence of gonorrhoea compared to national rates.
Aims To assess the performance of the gonococcal (GC) nucleic acid amplification tests (NAAT) against culture and to advise all areas of sexual health.
Methods Female endocervical, vulvovaginal and urine samples were taken for culture and NAAT. Male urethral swabs for culture were taken in parallel with urine samples for NAAT. Throat and rectal samples were also taken.
Results 309 cervical samples for culture, 289 cervical samples for NAAT. 97 vulvovaginal swabs and 93 female urine samples were taken. In males, 246 urethral culture samples and 251 urine samples were taken. 45 throat swabs and 29 rectal samples were taken. In females there was concordance in all results except for 1 throat swab (culture positive, NAAT negative) In males, there was concordance in all results except for two samples (urine NAAT positive, urethral culture negative). Two rectal samples were NAAT positive but culture negative—both were from men having sex with men (MSM) and were gonorrhoea contacts. Six throat samples were positive in NAAT but culture negative—(all MSM), 1 was a contact. 3 were sent for further testing using a different NAAT (aptima combo 2—all these assays were negative).
Conclusion NAAT testing was recommended at all sites except for throat swabs given the lower specificity at this site (88%) in males. The study confirms the need to evaluate GC NAAT testing sampling in low prevalence areas but differs from other studies as regards testing from throat samples.