O18.2 '3 IN 1' STUDY: POOLING SELF-TAKEN PHARYNGEAL, URETHRAL AND RECTAL SAMPLES INTO A SINGLE SAMPLE

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Background APTIMA Combo 2 (AC2) reliably detects *Chlamydia trachomatis* (CT) and *Neisseria gonorrhoeae* (NG) at extra-genital sites in men who have sex with men (MSM), but testing three separate samples (pharynx, urethra, rectum) is costly. Self-taken pharyngeal and rectal samples can be added to first-void urine (FVU) and tested as a single pooled sample (PS). We compared the sensitivity of PS with individual sample testing (SOC), and its acceptability to patients. In addition sample processing methods were compared (Method A: swabs and FVU into universal container to laboratory; Method B: APTIMA urine tube spiked with swabs to laboratory).
Methods MSM (symptomatic or CT/NG contacts) were recruited at two clinics. All were tested by PS and SOC; order of sampling was randomised. Demographics, sexual behaviour, symptoms, signs and acceptability were collected. Any positive AC2 test was considered a true positive. Each clinic used one processing method (not randomised).
Results 627/700 planned MSM recruited to date (43% HIV+); 65% symptomatic; 43% unprotected anal sex in the last month. 94 CT and 189 NG infections were detected (prevalence of CT and/or NG 46%; dual infection 6%). The sensitivity of PS and SOC to detect CT and NG was 92% and 96% respectively (p = 0.68). PS failed to detect 22 infections (CT = 6; 1 pharynx, 4 rectum, 1 urethra, and NG = 16; 11 pharynx, 4 rectum, 1 urethral).
Method A was used in 20/22 (91%) of missed cases; 21/22 (95%) were positive at a single site. SOC failed to detect 4 infections (CT = 3, NG = 1). 90% of MSM found self-taken sampling acceptable; 85% (n = 532) would be happy to take their own samples at home.
Conclusion PS compares well with SOC. It offers the potential for significant cost savings and easier home testing. Missed infections may be due to the method of sample processing or low organism numbers.

Abstract O18.2 Table 1

Infection (N = 626)	NG (Prevalence 15%, N = 94)		CT (Prevalence 31%, N = 191)
Overall Sensitivity % (95% CI)	PS: 92 (87–93) SOC:99 (97–100)	Overall Sensitivity % (95% CI)	PS: 96 (90–98) SOC:98 (93–99)
Method A% (95% CI%) N = 460	PS: 90(82–93) SOC:99(96–100)	Method A %(95% CI%) N = 460	PS: 94 (86–98) SOC:97 (90–99)
Method B % (95% CI%) N = 166	PS: 96(87–99) SOC:100(93–100)	Method B % (95% CI%) N = 166	PS: 100(87–100) SOC:100(87–100)

O18.3 UTILITY OF CEREBROSPINAL FLUID ANALYSIS IN THE INVESTIGATION AND TREATMENT OF NEUROSYPHILIS

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Background British guidelines detail indications for, and interpretation of, cerebrospinal fluid (CSF) examination in those diagnosed serologically with syphilis. We wished to evaluate our current clinical practise.
Methods We retrospectively studied all consecutive CSF syphilis tests performed in a large centre in London, UK, over five years. Indications for the examination, patient demographics, HIV metrics, serological tests for syphilis, and treatment regimens were examined.
Results A total of 291 CSF syphilis investigations were reviewed. 19% (n = 54) were requested to confirm or refute a diagnosis of neurosyphilis. Indications included serological diagnosis of syphilis plus symptoms: headache (28%), neurocognitive decline (9%), ophthalmological symptoms (18%), hearing loss (9%), other cranial nerve involvement (6%), psychosis (4%), and treatment failure (6%).

Of this group, 37% (n = 20) were treated for neurosyphilis. 2% of those having had CSF examination for other indications were also treated for neurosyphilis (n = 5). All bar one patient were seropositive for syphilis.

Of those treated for neurosyphilis (n = 25), all were HIV positive and 88% were male. Breakdown of CSF analysis revealed: CSF syphilis enzyme immunoassay (EIA) +/VDRL+ in 4%; EIA+/VDRL- in 56%; EIA-/VDRL- in 20%; and EIA equivocal/VDRL- in 20%.

All patients in this group were treated in line with British guidelines.

Of the 34 cases not treated for neurosyphilis, results were: EIA+/VDRL- in 35%; and EIA-/VDRL- in the remainder.

No patient had a positive CSF VDRL in the absence of a negative CSF EIA.
Conclusion All patients with a positive VDRL in the CSF were treated for neurosyphilis, but this was a rare finding; 54% of patients who were CSF EIA+/VDRL- were treated for neurosyphilis. A proportion were treated for neurosyphilis despite CSF analysis refuting the diagnosis (EIA-). Cell counts, CSF chemistry, and clinical criteria may influence these differences. Further diagnostics may improve the sensitivity and specificity of CSF examination for neurosyphilis.

O18.4 LACK OF VITAL CAPACITY OF CHLAMYDIA TRACHOMATIS IN FALLOPIAN TUBES OF PATIENTS WITH ECTOPIC PREGNANCY

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Ectopic pregnancy has been serologically associated with C. trachomatis in many studies but the role of persistent chlamydial infection of the Fallopian tubes in ectopic pregnancy is still unsolved. Fresh frozen tubal and cervical tissue from 121 patients with ectopic pregnancy in a hospital setting were examined for the presence of C.trachomatis, Mycoplasma hominis/genitalium, Ureaplasma urealyticum, Neisseria spp. (including N. gonorrhoeae) and Trichomonas vaginalis DNA by polymerase chain reaction (PCR). Blood samples were analysed for antibodies to C. trachomatis (immunoglobulin (Ig) G, M and A, IgG antibodies to Chlamydia heat shock protein 60 (cHSP60) and Major Outer Membrane Protein (MOMP) and Pgp3.
Results U. urealyticum (UU) was the most common pathogen (22.31% in tubal tissue and 27.27% in cervix) while M. hominis was a more rare agent (4.96% in tubal tissue and 4.13% in cervix) and other agents were detected even more rarely (2.48% genitalium in tubal tissue and 0% in cervix, Neisseria spp. 2.48% in tubal tissue and 5.79% in cervix, C. trachomatis 4.96% in tubal tissue and 0% in cervix, Tr. vaginalis 2.48% in tubal tissue and cervix). In most cases (73.55%) tubal pathology was associated with presence of serum G antibodies against the Chlamydial major outer membrane protein (MOMP) and Pgp3.
Conclusions In 83.47% cases we found different kind of Chlamydial antibodies. Persistent Chlamydial infection could not be widely demonstrated in tubal tissue from these patients and the infection had probably resolved prior to the ectopic pregnancy. We believe that our negative results in PCR reflect a true absence of C. trachomatis and suggest that persistent infection of C. trachomatis in the Fallopian tubes is rare in ectopic pregnancy in our population. UU was more frequently found in both points, without a significant difference between cervical and tubal tissue, indicating that UU is a commensal microrganism.

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