

P31

T20 use in the UK: is it optimal?

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Aim: To compare UK prescribing of T20 and response with known predictive factors for treatment success in the TORO studies.

Method: UK wide audit of patients receiving T20.

Results: 61 patients from 11 centres. Median time on ARVs was 85 months (range 15–152) with 12 (3–29) prior agents. At starting T20 ('baseline') median CD4 was 84 (range 4–456) and viral load 4.7log (0–6log). 24 patients had a baseline CD4 count >100cells; 30 had a viral load ≤5log, and 20 had ≤10 previous ARVs at baseline. Only 7 patients met all 3 predictive factors for success. Resistance data and genotypic sensitivity score will be presented. The median CD4 count rise and viral load drop in the whole group was 40 cells and 1.4 log respectively. The probability of achieving either a VL<400 copies was greater in those with all 3 predictive values (86% vs 0%; p=0.0001) with a trend for <50 copies (14% vs 0%; ns). 10 (16%) patients discontinued. 46% of patients reported no injection site reactions.

Conclusion: Despite the majority of patients initiating T20 in an unfavourable setting, reasonable responses were seen and T20 was well tolerated. T20 may perform better if use is optimised.

P33

Efavirenz concentrations resulting from co-administration of rifampicin with either 600 or 800 mg efavirenz

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Aims: Current guidelines recommend increasing the efavirenz dose from 600 to 800 mg q.d. when co-administering with rifampicin. However, recent studies suggest that the standard efavirenz dose is adequate when given with rifampicin (Pedral-Sampio *et al.*, 2004; Patel *et al.* 2004). This retrospective survey of the Liverpool TDM dataset (1999–2004) compared efavirenz plasma concentrations in adult patients taking rifampicin with either 600 or 800 mg efavirenz.

Methods: Data from samples taken between 8–16 hours post-dose were analysed. Patients considered to be non-adherent (concentrations <100ng/ml) were excluded. Data were analysed using Mann Whitney-U and Fisher's Exact statistical tests.

Results: There was no difference in efavirenz concentrations between patients taking 600 (n=20) or 800 mg (n=125) efavirenz (median 2543 vs. 2698 ng/ml; p=0.78). The percentage of patients taking 600 mg efavirenz with concentrations below the considered minimum effective concentration (1000 ng/ml) was not different from those taking 800 mg [4.8% vs. 10.0%; OR=0.45 (95%CI 0.07-4.97) p=0.30]. Likewise, there was no difference in the proportion of patients with high (>4000 ng/ml) efavirenz concentrations [30.4% vs. 40.0%; OR=0.66 (95% CI 0.23–2.01), p=0.40].

Conclusion: There was marked interpatient variability and the datasets were unequal. However, efavirenz concentrations were comparable irrespective of dose given.

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Natural killer cell function and KIR receptor expression in HIV long term non-progressor

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Aim: Investigation of NK cell function and KIR receptor expression in HIV long-term non-progressors (LTNP).

Method: NK cell cytotoxicity of 8 control, 6 HIV-infected and 10 HIV LTNP (defined by viral load and CD4⁺ count) individuals was measured using a standard 4-hour ⁵¹Cr release assay. PBMCs were stained with anti-CD16, anti-CD56 and anti-CD3 antibodies to identify NK cell subsets. NK cell receptor expression was examined by flow cytometry.

Results: NK cell cytotoxicity was decreased in all HIV patients relative to controls [previously reported]. Cytotoxicity was increased in HIV LTNPs relative to HIV progressors (P=0.01), although it did not reach control levels. Whilst the percentage of NK cells (CD56+ and/or CD16+ lymphocytes) was similar in all groups, expansion of CD16+CD56-, a subset that shows poor cytotoxicity, was increased in both HIV groups. The percentage of NK cells expressing KIR receptors was decreased in HIV progressors; levels on NK cells of HIV LTNP patients were similar to control values. KIR expression on T-cells was increased in HIV patients relative to controls, especially in LTNPs, possibly reflecting chronic activation of a T-cell subset.

Conclusion: LTNPs maintain NK cytotoxicity relative to HIV regular progressors, suggesting a role for NK cells in HIV control.

P34

Clinical experience with atazanavir

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Methods: A prospective review describing the results of treatment with atazanavir (ATZ) at 6 months of therapy

Results: As of 1/6/04, 241 individuals received ATZ, 231 ritonavir boosted, 10 ATZ alone. 89 protease inhibitor (PI) naive, 47 single PI experienced and 105 multiple (PI) experienced. Reason for utilization were virological failure (126) and switch, VL <50 (115). Reasons for switch, adverse drug reaction (78), adherence (9), end of trial (28). ATZ was switched for Kaletra (34), saquinavir/ritonavir (22), other PI (14), NRTIs (3), efavirenz (38), nevirapine (2). In patient switching therapy, at week 24 89% VL<50, 94%<500 by ITT and 94%<50, 99%<500 by OT. CD4 increment 98 cells. In virologically failing individuals, mean VL decrease -1.94 log in PI experienced, -2.12 log in PI naive.

	PI Naive		PI Experienced	
	OTT	ITT	OTT	ITT
<500	92%	76%	93%	79%
<50	84%	69%	72%	64%
CD4↑	+165	-	+124	-

Hypercholesterolaemia rate (>6.5 mmol/L) decreased from 15% to 9%. Mean bilirubin rise was 24 mmol/L. 4 individuals stopped therapy due to jaundice. 6 individuals with virological failure in whom pre/post therapy resistance tests were available, showed no new protease mutations.

Conclusions: ATZ may be successfully utilized on PI naive and PI experienced individuals requiring switch of antiviral agents.

P35

Single agent switching to tenofovir – a retrospective analysis

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Aim: To audit single agent switching to Tenofovir in combination therapy in HIV patients.

Methods: We identified patients prescribed Tenofovir (1/10/2003–31/03/2004), through our database. Naive prescriptions/switching following virological failure were excluded.

Results: Of 27 eligible patients, 1 was excluded due to virological failure (switched back to Stavudine). 26 patients remained – 20 (77%) male. Agents switched: Zidovudine (17; 65%), Stavudine (7), Abacavir (1), Didanosine (1). Reasons for switch: lipodystrophy/fat loss (17), nail discolouration (1), raised serum lipids (1), lipodystrophy concern (1), peripheral neuropathy (1), neutropaenia (1). No reason for switch recorded: 4 patients. Regime simplification was not cited as a reason for switch in this sample. Mean serum Hb at baseline was 14.01g/dL. Mean serum haemoglobin and random cholesterol six-month post switch were not significantly different to baseline ($p=0.43$ and $p=0.36$). Six months after switching, 8/17 lipodystrophy patients showed subjective improvement (7/8 objective); 9/17 no worsening. The patient with raised serum lipids improved (t_0 T Chol = 11.20mmol/L; t_6 T Chol = 6.23mmol/L). The patient with peripheral neuropathy also improved subjectively.

Conclusions: Data in our cohort suggests that switching to Tenofovir is clinically beneficial in the management/stabilisation of patients with lipodystrophy. Longer follow up would be valuable.

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The use of atazanavir/ritonavir as part of a once daily antiretroviral therapy regime in intravenous drug users

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Aim: The aim of this study is to evaluate efficacy, adherence, tolerability and hyperbilirubinemia in an atazanavir (ATV) containing antiretroviral (ART) regimen.

Methods: All patients who commenced an ATV containing ART regimen between October 2003 to October 2004 were included in this prospective study. Adherence was measured by cross-referencing with pharmacy records. Symptoms of methadone withdrawal were monitored regularly by the drug treatment centre and at each HIV clinic visit. Week 12 data is presented.

Results: 45 patients were included in this study. 33/45 (73.3%) were fully adherent to ART. On the basis of on treatment analysis, the mean increase in CD4 count was 101.2 cells/mm³ and 19/33 (57.6%) had VL<50 cpm. Of the remaining 14 patients who still had detectable VL, 13/14 had a 2 to 4 log reduction in VL. On intention to treat analysis, 42.2% of patients had VL<50 cpm. There were no cases of methadone withdrawal clinically. 10/33 (30.3%) of patients developed hyperbilirubinemia, none requiring discontinuation of ATV.

Conclusion: Atazanavir is a favourable option in an ART regime for an IVDU to facilitate once daily directly observed therapy.

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Boosted atazanavir use in an intravenous drug user cohort

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Introduction: Atazanavir (ATZ) is the first once-daily (OD) protease inhibitor for the treatment of human immunodeficiency virus type 1 infection and was first prescribed at our service in September 2003, soon after it received FDA approval. Due to its OD dosing, it is favoured when choosing an ART regime for an intravenous drug user (IVDU) to maximize compliance.

Aims: The aim of this audit is to analyse HIV positive IVDU attending our clinic to determine: The proportion receiving a boosted ATV containing regimen as their first ART regimen versus salvage regimen; Compliance at the end of the follow up period; The effect of boosted ATV containing ART regimen on CD4 and HIV viral load (VL); The frequency of hyperbilirubinemia due to ATV and its severity.

Method: A retrospective chart analysis of patients attending our HIV clinic and receiving a boosted ATV containing ART regime from September 2003 to October 2004. These patients were followed up for 3 months from the date of ATV commencement. Data was also cross-referenced with pharmacy records.

Results: There were a total of 67 patients who received ATV during the specified period. Of these, 45/67 (67.1%) were IVDU. 11/45 were on their first ART regimen, 14/45 had received more than 2 previous ART regimens. After 3 months, only 33/45 (73.3%) were still compliant with the boosted ATV containing ART regimen. The rest were either lost to follow up or still attending the clinic, but non-compliant with treatment.

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Clinical experience with atazanavir

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Purpose of study: Boosted Atazanavir (ATZ/r) has been licensed in Europe since 2004 for the management of treatment experienced HIV positive patients. In the 045 study which demonstrated similar efficacy between ATV/r and boosted lopinavir, the number of patients assigned to the boosted atazanavir was relatively small (n=120). Additional data on the outcomes of patients taking boosted atazanavir will aid in informing future clinical practice.

Methods: Ongoing, prospective, observational study on patients receiving ATV/RTV 300/100 mg daily as part of combination antiretroviral therapy (CART). Parameters assessed include HIV RNA, CD4 cell count, and safety (including lipids).

Results: Available to 48 weeks. Table 1 describes the demographic and clinical baseline characteristics of patients.

Baseline characteristics (at starting or switching to Atazanavir/r)	n=40
Median age	38
Ethnicity %	
White	30
Black African	65
Other	5
Proportion treatment experienced	40 (100%)
Median CD4 (cells/mm ³)	229
Baseline viral load <50 copies/ml	17 (43%)
Median bilirubin change μ mol/L	+32

Conclusions: ATZ/r was well tolerated and there were no discontinuations. Expected elevations in serum bilirubin were observed. Most patients commencing an ATZ/r containing regimen achieved viral suppression to <400 copies/ml at 48 weeks follow-up.

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Audit of concomitant protease inhibitor and proton pump inhibitor use

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Aim: Following recent interaction warning of atazanavir (ATV) and omeprazole we audited our cohort to identify if concomitant protease inhibitor (PI) and proton pump inhibitor (PPI) use had a negative effect on HIV +ve patients.

Methods: Retrospective case note review and prospective PI therapeutic drug monitoring (TDM) in a regional North-East HIV cohort.

Results: 11 episodes of longer-term concurrent PI/PPI treatment in 10/450 HIV+ve were identified: 9 episodes used lansoprazole, 2 omeprazole whilst on various PI regimens. No concurrent ATV or ATV/omeprazole prescription was identified. 1 patient had viral load increase whilst on omeprazole/SQVandRTV which was attributed to viral resistance development. Rest of patients did not have any negative change in their viral loads. Patients on current PI/PPI treatment had TDM requested. Of those 2 patients on ATV or ATVr and PPI (lansoprazole) had TDM which were within therapeutic levels.

Conclusion: No patient was on potentially dangerous ATV and omeprazole. However patients on ATV or ATVr/lansoprazole combination did not have reduced ATV levels. Patients on boosted or unboosted ATV requiring acid suppression may be safer to use PPIs with limited interaction like lansoprazole.

P41

Effectiveness of tipranavir in a clinic cohort

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Aim: Tipranavir is the first non-peptidic protease inhibitor, and is active against both wildtype and multiple PI resistant HIV-1. It's position in the HIV armamentarium remains unclear, with many physicians utilizing this drug only in late stage salvage.

Methods: Retrospective note review

Results: Ritonavir boosted tipranavir has been utilized in 10 patients at our unit. 8 male and 2 female. 8 patients received this drug following virological failure of protease inhibitor therapy, one for intensification, one had HIV-2. Patients were extensively pre-treated having received a mean of 5.4 NRTIs, 1.4 NNRTIs and 2.9 PIs. 4 received T20. In 8 individuals with virological failure, 7 had 5-8 PI mutations, one greater than 8 PI mutations. Of 8 individuals with a viral load quantifiable above 500 copies, 2 individuals achieved a viral load fall greater than 1 log within 6 months of therapy, and one individual a viral load below 500 copies. In both individuals who achieved a viral load fall greater than 1 log, the number of active drugs other than tipranavir in the regimen was 2, compared with no other active drugs in all 6 individuals who did not achieve this endpoint.

Conclusion: Tipranavir when used as very late therapy with no other agents is a non-successful therapeutic approach. Individuals with other active agents available respond.

P40

Atazanavir and acid suppressants – are doctors and patients aware?

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Aim: To investigate the incidence of co-administration of atazanavir and proton pump inhibitors or H2 antagonists in a clinic cohort.

Methods: A prospective survey of patients who consecutively attended the clinic pharmacy, established on atazanavir. Patients were questioned as to whether they were currently taking a PPI/H2 antagonist, whether it was prescribed by their doctor, purchased over the counter (OTC) and if they were aware of the potential problem with co-administration of these medications and atazanavir.

Results: 68 patients were surveyed. 15 were currently taking PPIs or H2 antagonists. 14 of these (93%) had purchased the drug OTC. Only 53% of patients stated that they were aware of any guidance on the co-administration of these agents with atazanavir.

Conclusion: Despite the fact that all patients attending our clinic are counselled regarding drug interaction issues and issued with written information when initiating atazanavir, this survey demonstrates that repeated reinforcement of such information is required at each visit. Conversely, only 1 patient had received their PPI/H2 antagonist via prescription which suggests that clinicians/HIV pharmacists seem to be well informed of the data.

P41a

A sensitive case

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A 34 year old Afro-Caribbean lady was diagnosed with HIV in June 2004. CD4 = 231 (26%). On 16/07/04, in Zambia, she was commenced on Trimune bd (Stavudine 30mg, Lamivudine 150mg and Nevirapine 200mg) after a lead in period with nevirapine alone. She presented to our centre on 18/08/04 with fever, abdominal pain and diarrhoea and 3 days later facial oedema and a maculopapular rash were seen. This progressed to a bullous and then blistering rash with involvement of mucous membranes.

A diagnosis of Toxic Epidermal Necrolysis was confirmed on skin biopsy and in association with an acute hepatitis, a hypersensitivity reaction to Nevirapine was presumed. Drugs were withdrawn, she received human immunoglobulin and had a long and complicated recovery.

The pathogenesis of Nevirapine hypersensitivity is probably immune mediated. There is a spectrum of severity, the incidence of Stevens Johnson syndrome is 0.3-1%. Risk is multifactorial and has been linked to female sex, CD4 count >250, Afro-Caribbean race and an HLA association. Toxicogenomic studies are underway and may identify other markers.

Specific treatment options are limited, although intravenous immunoglobulin has been used with some success.

This case highlights the importance of drug toxicity in HIV disease.

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Prevalence of genital infections in a cohort of HIV-positive pregnant women

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Aim: To investigate the prevalence of genital infections in a cohort of HIV positive pregnant women.

Methods: All HIV positive pregnant women are offered a vaginal examination and screen for infections at 16–18 weeks and at 32 weeks. The screens are predominantly done in the 'Splash' clinic; a service based in the HIV clinic, run by a specialist GUM nurse. Retrospective clinical data from this service was analysed.

Results: 42 out of 55 women agreed to screening between May 2003 and December 2004. Median age was 33 (range 19–41) and median CD4 was 318 (range 86–713). 8 were newly diagnosed with HIV. 19 women had two screens and the rest one. 22 women had infections detected; candida (8), bacterial vaginosis (7), chlamydia (1), B-haemolytic streptococcus (1), genital warts (1), bacterial vaginosis and candida (1), HSV and candida (1), genital warts and HSV (1). One woman had bacterial vaginosis and candida initially and candida alone on second screen.

Conclusion: Genital infections in pregnant women are associated with adverse pregnancy outcomes (miscarriage, preterm delivery and infant infections). The prevalence of genital infections was 52 per 100 women. We recommend that all HIV positive pregnant women should be routinely screened.

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Kaletra in pregnancy – experience of a north London teaching hospital

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Introduction: HAART may increase the risk of premature delivery. Kaletra is often used during pregnancy, yet little is known of its effects on pregnancy complications.

Methods: We retrospectively investigated pregnancy outcome, HIV factors and routine blood results of women receiving Kaletra during pregnancy between 2002–2004.

Results: Of 35 HIV+ve women, 11 (31%) used Kaletra during pregnancy, 6 received it prior to conception and 9 were black-African. Pre-pregnancy median CD4 counts and viral loads in patients commencing Kaletra during pregnancy and those using Kaletra prior to pregnancy were 478cells/mm³ and 6050copies/ml, and 499cells/mm³ and <50copies/ml respectively. 9/11 were admitted prior to planned caesarean section (CS), 4 were in labour, 3 had SROM, 2 suffered placental abruptions and 1 had HELLP. Additionally, 8 had emergency CS, 1 had spontaneous vaginal delivery and 2 had elective CS. Median gestation at delivery was 37+2 (excluding 1 emergency CS at 27wks). Median ALT was 13IU/l and AST 20IU/l. Viral loads <50copies/ml were seen in 9 women at delivery. Mean birth weight was 2765.5g (excluding 1 born at 27wks); 3 were admitted to neonatal ICU. All babies remain HIV-negative with no abnormalities.

Conclusion: Kaletra is a viable choice for HIV+ve pregnant women but additional monitoring during the 3rd trimester is recommended.

P43

Potential clinical importance of altered nelfinavir pharmacokinetics in pregnancy

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Aim: Nelfinavir is widely prescribed in pregnancy but PK studies have shown reduced nelfinavir and M8 concentrations in pregnant women. We sought to determine whether these changes might impact on the antiviral effect of nelfinavir-containing HAART, using the initial rate of viral decay in treatment naive patients as a surrogate marker.

Method: Pregnant and non-pregnant women commencing either nelfinavir or nevirapine, with AZT/3TC were identified retrospectively. The crude rate of viral decay was determined from pre-treatment and temporally comparable first on-treatment viral loads and compared for significance using t-test.

Results: 39 pregnant (nevirapine n=17, nelfinavir n=22) and 27 non-pregnant women (22 and 5) were identified. Viral t_{1/2} in pregnant women taking nelfinavir was prolonged compared with non-pregnant women (4.15 v 2.94 days p 0.03). No significant difference was seen by pregnant state with nevirapine (2.1 v 1.75 days p 0.18). HIV decay at 2 weeks was significantly prolonged in the pregnant nelfinavir group compared with nevirapine (3.02 v 1.94 days p = 0.004).

Conclusion: Although the study's small, retrospective and limited by relatively late first on-treatment viral load sampling the reduced rate of viral decay in pregnant women taking a nelfinavir-containing regimen suggest that the PK data are of clinical importance.

P45

Outcomes of planned vaginal delivery of HIV-positive women managed in a multi-disciplinary setting

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Aim: To investigate the management and outcomes of HIV positive women having planned vaginal deliveries.

Methods: Women with or expected to have viral loads of <50 copies/ml at 36 weeks are offered the option of a vaginal delivery provided there are no obstetric contraindications. Analysis of case notes and computerised data on this cohort was performed.

Results: Between January 1999 and December 2004, 24 women (total 141) planned to deliver vaginally had 32 infants; 7 had >1 pregnancy. The proportion of the total infants born vaginally statistically significantly increased. With HAART all women achieved viral load <50 copies/ml =6 weeks prior to labour. Five women had an emergency caesarean section after the onset of labour due to failure to progress and one woman had a planned caesarean section after a rebound in viral load just prior to delivery. The median length of labour in the rest was 5 hours and 23 minutes. The median infant gestational age and birth weight was 39 weeks (IQR 37–39), and 2.9kg (IQR 2.6–3.2) respectively. There has been no HIV transmission to date.

Conclusion: Women with viral loads of <50 copies/ml at 36 weeks should be offered the option of a planned vaginal delivery with optimal intra-partum care and senior review in labour.

P46

HIV infection results in body fat redistribution

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Background: Lipodystrophy is seen in some HIV infected patients receiving antiretroviral therapy. Peripheral lipoatrophy has been reported in some HIV treatment naive patients. To our knowledge there have not been any comparisons with HIV negative controls.

Aims: Cross sectional study to measure body fat distribution by DEXA scan in HIV infected treatment naive patients and HIV negative controls

Methods: Whole-body DEXA scans and fasting plasma lipids and glucose were performed in 25 HIV infected treatment naive patients (20 male) and 15 control subjects (8 male). Peripheral fat (arms plus legs), trunk fat and lean mass were expressed as g/height (cm). Ethical committee approval was obtained. Comparison between groups was by Chi-Squared test and Man Whitney test.

Results: There were no differences in age, sex and ethnicity, LDL cholesterol, triglyceride, and glucose between the groups. Serum HDL cholesterol was significantly lower in the HIV infected persons (table 1) as was total cholesterol. While BMI and lean mass was similar between the two groups, HIV infected patients had a greater lean mass/height and a significantly reduced limb fat/height but not total fat/height or trunk fat/height (table 1).

	Controls	HIV treatment Naive	P value
Age	32 (23–40)	34 (29–38)	0.41
Total cholesterol	5.10 (4.20–5.50)	4.30 (3.38–4.78)	0.012
LDL cholesterol	2.41 (2.20–3.48)	2.53 (1.92–2.92)	0.62
HDL cholesterol mmol/l	1.7 (1.5–2.2)	1.0 (0.9–1.2)	<0.001
BMI kgm ²	24.1 (20–27.2)	23.8 (21.4–25.2)	0.62

Median +/- interquartile range

Conclusion: Compared to control subject, HIV infected patients who are not on antiretroviral treatment have approximately 2.5 kg (28%) loss of limb fat compared to HIV negative controls.

P47

Decreased incidence of lipoatrophy in a group of HIV-positive people taking HAART (highly active antiretroviral therapy) without stavudine assessed by anthropometry measurements and reported self-perceptions of body shape changes

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Aim: To assess fat redistribution occurrence in the current therapeutic era.

Method: An observational study comparing morphological changes before HAART and 12–36 months post HAART using anthropometry and standardised questionnaire.

Results: This treatment naive group (n=74) enrolled 6/2000–11/2002 consisted of 42% women, 51% black Africans, 19% black Caribbeans, 30% Caucasians, with mean age 37.5 (SD=8.3) mean nadir CD4 173.2 (SD=139). Ninety-three percent of nucleoside analogues used were zidovudine, lamivudine, emtricitabine, abacavir; non-nucleosides used consisted of efavirenz (83%), nevirapine (17%). Four percent of prescribed drugs were protease inhibitors (PIs). Anthropometry, consistent with reported patient perceptions, showed statistically significant increases in weight (p=.000), waist circumference (p=.018), suprailiac (p=.047) indicating increased subcutaneous adipose tissue, mid-upper arm (p=.008), and hip circumference (p=.023). This trend was strongest among women, black Africans and with CD4 nadir <200. Improvements were reported for facial wasting from pre-treatment levels, particularly among over 35s (p=.034). There were no statistically significant increases in LDL cholesterol, reported thinning of legs, buttocks, or increased vein prominence.

Conclusion: Unlike stavudine containing HAART regimes, these results demonstrate an absence of lipoatrophy but high incidence of increased abdominal girth despite very limited PI use. Increased waist size may largely be due to substantial weight gain on HAART in this population.

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Experience of the use of statins and fibrates in patients receiving highly active antiretroviral therapy (HAART) in the Edinburgh HIV Cohort

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Background: Our objective was to assess the indications for commencing lipid lowering agents and their efficacy and tolerability.

Methods: Medical notes were reviewed for patients on HAART and a lipid lowering agents.

Results: There were 330 patients on HAART, of whom 29 were on a statin, 2 a fibrate and 2 both. 7 patients had diabetes, 7 ischaemic heart disease, 5 peripheral vascular disease and 2 cerebral vascular disease. 10 year risk of a major coronary event was calculated for patients at time of commencing statin/ fibrate: 6= <10%, 8= 10–20%, 8= >20%, 1= >30%, 8= insufficient data. 1 patient had a possible statin related rash; there were no cases of myositis or hepatotoxicity. 26% of patients had >30% decrease in cholesterol at 6 months. Of patients <30% change in cholesterol, 43% (10/23) had their statin increased or a fibrate added and of these 20% (2/10) had >30% decrease in cholesterol at 6 months.

Conclusions: The threshold for commencing patients in this cohort on a lipid lowering agent maybe lower than in the general population. Statins and fibrates were well tolerated. Further guidance is needed to help in the management of those patients who have poor response to these agents.

P49

Long-term efficacy and safety of injectable poly-L-lactic acid for the correction of facial lipoatrophy

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Objective: To evaluate the long-term safety and efficacy of injectable poly-L-lactic acid (PLLA) for the correction of HIV-associated facial lipoatrophy (LA).

Methods: This was a randomised, open-label, comparative, single-centre study of Immediate (Weeks 0, 2 and 4) or Delayed (Weeks 12, 14 and 16) PLLA treatment, administered as three sessions of bilateral injections into the deep dermis above the buccal fat pad. Efficacy was evaluated at the Recall Visit (12–18 months post final study assessment) using visual analogue scales (VAS) to record patient satisfaction, and by the Hospital Anxiety and Depression Scale (HADS). All adverse events (AEs) were recorded.

Results: Twenty-seven of 30 patients returned for the Recall Visit. Significant improvements over baseline in VAS scores for facial appearance were sustained to the Recall Visit in both groups (p<0.05 and p<0.001). Improving trends in HADS scores were also noted. One case of injection-site induration and 9 cases of injection-site nodules were noted the Recall Visit, none of which were serious or severe.

Conclusions: Physical and psychological benefits of PLLA are sustained over at least 18 months. Delayed AEs are neither serious nor severe and include mild nodularity at the treatment site.

P50

Nucleoside reverse transcriptase inhibitors (NRTI)-related hepatic fibrosis and decompensated portal hypertension

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Aim: We report three cases of advanced hepatic fibrosis in HIV-positive patients on highly active antiretroviral therapy without any other aetiology of liver disease.

Results: Three patients presented to our centre with variceal bleeding. Prolonged previous therapy with stavudine and didanosine were involved in all cases (median 5.6 years). Two patients had also taken hydroxyurea. Mild transaminitis and lipodystrophy was previously noted in all the patients. Other recognisable aetiologies of liver disease were not seen on liver biopsies or evident from laboratory tests or past medical histories. All denied alcohol intake. They had well-controlled HIV disease (CD4 count higher than 250 cells/mm³ and viral load less than 1000 copies/mL in all the cases). Variceal bleeding were treated initially with band-ligation and then prophylactic banding as well as nonselective betablockade. Antiretrovirals were changed to nucleoside sparing regimens. Liver transplantation is being considered.

Conclusion: Prolonged NRTI therapy may lead to progressive hepatic fibrosis, probably as a result of mitochondrial toxicity and non-alcoholic steatohepatitis. Clinicians should be aware of the risk of significant liver disease in patients with lipodystrophy, prolonged current or previous NRTI-use and even a moderate transaminitis. These patients should be offered early evaluation for fibrosis and portal hypertension.

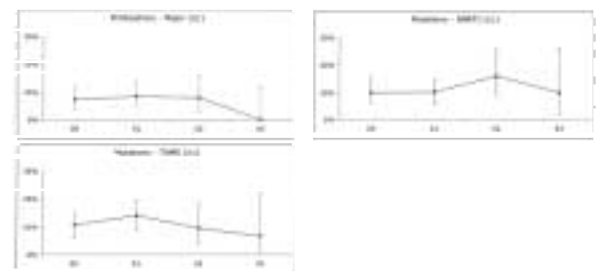
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The prevalence of canonical resistance mutations in naive HIV-1 infected patients is low and did not increase over the time period of 2000 to 2003

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Background: Recent studies have suggested that the transmission of drug resistant virus following primary HIV infection is increasing. This study examines the prevalence of mutations in an ARV naive population from 2000–2003 at the Chelsea and Westminster Hospital. **Methods:** Since 2000 all patients naive to therapy have had a resistance test performed on the first stored blood sample available. Significant mutations were identified using IAS criteria. Individuals with VL<500 were excluded from the analysis.

Results: The prevalence of mutations in each of the 3 classes of ARVs has been 10% over each of the last four years. (χ^2 for trend analysis p=0.5).



Conclusion: Acquisition of drug resistant HIV-1 has been constant over the last four years.

P51

Thyroid dysfunction amongst HIV-infected patients: HIV or HAART?

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Aim: To evaluate the prevalence of thyroid disease in our HIV cohort and to assess the possible role of HAART.

Methods: We reviewed the case notes of all patients prescribed thyroid medication between April 1995–June 2004. Patients with known thyroid disease were excluded. Routine screening of thyroid function was subsequently performed from August–November 2004.

Results: Of 35 patients, 3 had thyroid disease pre-HAART. 72% were male, 84% White Caucasian and mean age was 43.1 years. Median (IQR) CD4: 228(156-325) incidence/10000 patient years (95%CI).

	Hypothyroidism	Hyperthyroidism
n	n=8(24%)	n=25(76%)
Male (%)	4(50%)	20(80.0%)
*Pre-HAART	0.4(0.0-2.4)	0.0(0.0-3.1)
*Post-HAART	3.4(1.9-5.9)	10.0(8.5-11.6)
Prevalence of thyroid antibodies in blood sample per 100 patients	4(50%)	4(16%)
Incidence/10000 patient years (95%CI)		
Routine screening results: n=2437		
	Hypothyroidism	Hyperthyroidism
Male (%)	21(86.9%)	22(91.7%)
Clinic prevalence	1.01%	1.2%

	Clinic Cohort	Hypothyroidism	Hyperthyroidism
Patients on PI	90(34.9%)	13(14.8%)	6(6.7%)
Patients on NNRTI	170(65.1%)	8(4.7%)	19(11.2%)
Patients on 3 NRTI	54(20.3%)	2(3.7%)	2(3.7%)
Naive patients	66	2(3.0%)	3(4.5%)
Total cohort	280		

Conclusion: The results indicate a significant prevalence of thyroid disease in HIV positive patients on HAART. Thyroid antibody production in some patients suggests an association with immune restoration following HAART. Thyroid disease was not linked to any class of ART.

P53

How common is the K65R mutation in clinical practice?

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Background: There is little data on the emergence of K65R in routine clinical settings, where there is widespread prescribing of Tenofovir (TDF) to both ART naive and experienced patients.

Methods: A retrospective review was carried out on patients who acquired the K65R mutation over a 6 year period.

Results: Since the availability of TDF, 350 patients have received this medication, with 27 patients developing the K65R mutation. Twenty-five patients (93%) were ART experienced with a mean of four prior combinations, including prior exposure to thymidine analogues (TA). Two patients were ART naive. At the time of the emergence of K65R, twenty-five patients were not receiving any TA. Both patients who were receiving a TA were poorly compliant. In addition to K65R, other mutations included: 7 x M184V, 11 x Y181C, 11 x K103N, 4 x Y115F, 2 x K219E, 3 x D67N. Twenty-four patients (88%) had no TAMs, and two patients had a single TAM, one patient with two TAMs. **Conclusion:** These data demonstrate that the emergence of the K65R mutation is not as common as perhaps thought from the clinical trial setting. The data also provides further evidence of the negative correlation between K65R and the presence of TAMs.

P54

Which antiretroviral regimens drive the K65R and L74V mutations?

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Aim: To investigate which antiretrovirals drive the K65R and L74V mutations.

Methods: Data were extracted for all patients entering our cohort since January 2000. We identified all those with either mutation, analysed preceding HAART regimens and calculated risk per 100PY of exposure to various combinations of TFV, ddI and ABC.

Results: 81 and 129 patients with available drug history developed K65R/L74V respectively. The numbers of patients (rate per 100PY) are expressed below.

		TFV	ddI	ABC	TFV/ddI	TFV/ABC	ddI/ABC	ddI/TFV
K65R	NNRTI only	5 (2.2)	9 (3.82)	2 (0.88)	15 (6.95)	2 (1.42)	4 (1.06)	5 (6.93)
	PI (+/- NNRTI)	2	1	1	1	1		1
	NNRTI only	1 (4.8)	1 (0.56)	1 (0.17)	1 (4.8)	1 (5.9)	2 (2.47)	1 (0.66)
L74V	NNRTI only	2 (0.49)	20 (1.62)	10 (0.88)	11 (0.42)		15 (3.74)	1 (1.77)
	PI (+/- NNRTI)	2 (0.77)	10 (0.92)	1 (0.1)	2 (0.6)		13 (4.94)	
	NNRTI only		4 (0.9)		2 (0.64)		5 (7.4)	3 (3.25)

Conclusion: K65R is driven mainly by TFV/ddI +/-ABC (particularly with NNRTI -only regimens). PIs appear to be protective. L74V is predominantly driven by ddI/ABC or ddI/TFV; although numbers are small, PIs don't appear to confer protection.

P56

The presence of a single canonical NNRTI resistance mutation in naive HIV-1 infected patients reduces the proportion achieving virological success when starting NNRTI-based regimens

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Aim: There is a 10% prevalence of resistance mutations in plasma samples from antiretroviral (ARV) naive patients. This study examines whether this influences the result of treatment.

Methods: Between 2000 and 2003, 808 patients had a resistance test retrospectively performed on a stored sample taken prior to initiating therapy with either a PI-based regimen, an NNRTI-based regimen or nucleoside analogues only. The proportion of patients who were virologically undetectable within six months was assessed.

Results:

	N	Rx PI	Rx NN	Rx NA only
PI mutation	28	5 ex 6	17 ex 19	2 ex 3
NNRTI mutation	49	13 ex 15	19 ex 31	2 ex 3
Multiple mutations	27	4 ex 9	8 ex 14	3 ex 4
No mutations	704	98 ex 155	397 ex 506	29 ex 43

Conclusion: More than half the patients treated with NNRTI regimens responded despite pre-existing resistance although response to a PI containing regimen was better.

P55

Do the mutations M046I and I047A confer resistance to Kaletra?

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Introduction: In HAART experienced patients, protease inhibitor (PI) resistance constitutes a major treatment challenge. Kaletra, the formulation of lopinavir and ritonavir, has significant antiretroviral potency often maintaining antiviral activity where other PI regimens have failed. Recent data have suggested that the mutations M046I and I047A may confer resistance to Kaletra.

Methods: All individuals with genotypic resistance tests demonstrating M046I and I047A were identified from a large, prospectively collected clinical database. Data were scrutinised to identify treatment history and immunological outcomes in each of the individuals.

Results: A total of 7715 resistance tests pertaining to 3476 patients have been collected at this institution. 104 individuals harboured M046I, I047A or both. Of these, 7 (6.7%) individuals had previous exposure to Kaletra as part of their antiretroviral regimen. 52 individuals were exposed to Kaletra following resistance testing. Of these, 33 (63.5%) maintained an undetectable viral load whilst prescribed a Kaletra containing HAART regimen.

Conclusion: Prior exposure to Kaletra is not required in the development of the mutations M046I and I047A. Presence of these mutations does not adversely affect virological response to Kaletra therapy as part of an HAART regimen.

P57

Nevirapine use in pregnant HIV-positive women – is it the end? (Experience of a provincial centre)

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Background: Since 1997 Nevirapine (NVP) has been used as monotherapy and combination in HAART to prevent mother to child transmission in HIV disease. Concerns about its use in patients with a relatively intact CD4 count prompted a 'Dear Doctors' letter in February 2004.

Aim: To review the use of NVP in pregnant females, and assess the incidence of adverse events in our cohort. To explore the impact, if any, on the prescribing practices post February 2004.

Method: The case notes of all HIV positive pregnant women between January 2000–December 2004 were reviewed.

Results: During this period the total number of pregnancies documented were 90, which included 5 miscarriages, 2 terminations and 1 stillbirth. Of the 82 pregnancies the majority were of Black African origin. 51 (57%) patients received NVP as combination therapy. 4 (7%) in this group developed side effects requiring hospitalisation, including a case of toxic epidermal necrolysis. Data will be presented indicating a shift from the recommended guidelines for the management of pregnant HIV positive women in our area post February 2004.

P58

Experience of delivering women with HIV in an inner city London hospital 1994–2002

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Objective: To compare pregnancy outcomes of women with and without HIV.

Design: Retrospective review of pregnancy and outcomes 1994–2002.

Setting: Inner City London Hospital, UK (Homerton University Hospital)

Results: A total of 82 deliveries were studied in 88 women with HIV. Compared to the general antenatal population these women were more likely to be black African with inadequate housing and only 65% spoke English as a first language. However there were few intercurrent medical or antenatal complications except previous history of depression. 81% were delivered by caesarean section. There was one vertical transmission in this period. 95% of the women with HIV had an uneventful postnatal period.

Conclusion: Based on our observations there is room for optimism about the obstetric course and outcome of pregnancy in women with HIV in a multidisciplinary setting.

P60

Tenofovir-associated renal dysfunction – can we predict it?

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Aim: To review cases of tenofovir (TDF) associated renal dysfunction within our cohort and to see if there are any predictors of this adverse outcome.

Methods: A review of all patients attending an urban HIV unit who have received TDF as part of combination antiretroviral therapy. Cases that have developed renal dysfunction (creatinine clearance <50ml/min) were identified and further evaluated.

Results: 101 patients have been prescribed TDF. Three cases of renal dysfunction were identified. Mean CD4 starting TDF was 171. Elevation in serum creatinine from baseline occurred in all cases. Hypophosphataemia occurred in one. The cases had a baseline creatinine clearance of 120, 71 and 85 ml/min. The latter two had significant co-morbidities including diabetes mellitus, hypertension and liver disease. 2/3 cases required hospitalisation and discontinuation of TDF with return towards baseline of renal parameters. 2/3 cases died, neither death was felt to be solely due to renal dysfunction.

Conclusion: The contribution of tenofovir to renal dysfunction is controversial. Although elevated creatinine was not seen in clinical trials, TDF has been linked with renal tubular dysfunction in several case reports. Our cases highlight the possibility of developing renal dysfunction while on TDF, but also indicate the potential contribution of other co-morbidities.

P59

HAART to heart. Where do DHIVA diets fit into BHIVA guidelines?

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Background: The BHIVA Treatment Guidelines for HIV infected adults (2003) state that all newly diagnosed patients should have baseline bloods including a lipid profile and glucose level. The aim was to audit the guidelines and subsequent action taken on abnormal levels.

Methods: An audit form was devised and the case notes of 70 patients, diagnosed with HIV since 2003, from 7 centres in England were reviewed.

Results: Baseline cholesterol, triglyceride and glucose were recorded in 68 (97%), 67(96%) and 61(87%) respectively, of patients studied. 23(34%) cholesterol, 20 (30%) triglyceride and 8 (13%) glucose levels were raised. Only 9 patients with raised levels were repeated fasting. 18 (25%) patients were referred to the dietician, of whom 6 were given appropriate lipid advice (Mediterranean diet, omega 3 fats, fruit and vegetables, increased activity levels), and a further 6 were found to have normal levels when repeated fasting. 6 patients were appropriately referred for other reasons including PEG feeding, nephrotic syndrome and weight reduction. None of the patients were prescribed lipid lowering medication.

Conclusion: Clinics are measuring baseline bloods to identify patients who may be at risk of lipodystrophy. In most cases, referrals to dieticians are made and the assessment of CHD risk factors may warrant further dietetic input.

P61

Toxic levels of efavirenz (EFV) two weeks after stopping therapy

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Introduction: We present a 40 year old HIV positive African woman who developed toxic levels of EFV which persisted for more than 2 weeks after stopping therapy.

Case Report: A 40 year old Zambian woman was diagnosed HIV positive in June 2004. Baseline viral load (VL) and CD4 were 22,121 copies per ml and 34×10^6 per litre respectively. Antiretroviral therapy was commenced with Zidovudine, Lamivudine and EFV along with Septrin for PCP prophylaxis. Two months later she complained of weakness, nausea, vomiting and shortness of breath, and further investigations revealed pulmonary tuberculosis. She was commenced on Rifampicin, Isoniazid, Ethambutol, Pyrazinamide and Pyridoxine, and her EFV was increased from 600 mgs to 800 mgs daily. Two weeks later therapeutic drug monitoring (TDM) was carried out which revealed an EFV trough level of 27,499 ng/ml. There were no neurological symptoms or signs at this stage. Her EFV was decreased to 600 mgs per day and a further TDM was carried out two weeks later. This showed a level of 44,463 ng/ml and EFV was stopped. At this stage she appeared vague, confused, was unsteady on her feet, walked with a broad based gait and exhibited dysidiadokokinesia. An MRI of brain was normal. Repeat TDM levels over the following two weeks showed a slow decrease in levels.

Conclusions: EFV levels rose to toxic concentrations despite co-administration with Rifampicin which is known to increase EFV metabolism. Levels fell slowly and were still in the toxic range more than two weeks after stopping therapy. Neurological toxicity was not noted until levels above 27,000 ng/ml were reached. TDM was vital to enable correct management. Further genetic investigations to sequence the CYP2B6 gene are being undertaken.

P62

The snail's progress: a case report of schistosomiasis in the era of HAART

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We describe a 36 year old man from South Africa, diagnosed with HIV infection in 1990. Following initiation of HAART in November 2002, his CD4 count increased from $190 \times 10^6/l$ to $230 \times 10^6/l$ in 4 weeks. At 6 weeks he presented with vomiting, abdominal pain and diarrhoea. Attributing these symptoms to his medication, he stopped his HAART, with prompt symptomatic improvement. The gastrointestinal symptoms recurred 3 weeks after re-initiation of HAART. During the following 2 years his symptoms forced him to stop treatment on 5 occasions – each time demonstrating the temporal association between HAART and these GI symptoms. Following extensive investigations, colonic histology demonstrated numerous granulomas containing ova of *Schistosoma mansoni*. *Schistosoma* antibody ELISA was positive at level 4. He was successfully treated with praziquantel. Schistosomiasis is the second most prevalent tropical disease, with approximately 120 million people worldwide symptomatic and 600 million at risk. *Schistosoma* eggs are highly immunogenic. Granuloma formation leads to fibrosis causing long-term damage. This patient probably acquired *S. mansoni* many years previously, but only experienced symptoms following initiation of HAART. This immune reconstitution appears to have resulted in an acute inflammatory response to his chronic infection. This phenomenon is likely to take on further significance with the increasing availability of antiretroviral medication in the tropics.

P63

HAART improves outcome from HIV-associated TTP

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Introduction: TTP is a rare cause of thrombocytopenia in HIV infection but incidence is up to 40 times higher than in the general population. It is due to deficiency of von Willebrand factor –cleaving protease (vWF-cp) activity. Standard treatment is plasma exchange (PE). Pre-HAART TTP appeared to be more common in those with advanced disease and had a poor prognosis.

Aim: Describe clinical presentation, laboratory data, treatment and outcome in the era of HAART.

Methods: Case note review.

Results: 9 patients identified, 5 not known HIV+. All black African heterosexuals, 8 female. HAART was started in the first week of (PE) treatment of TTP and reduced the number of PE needed. 8/9 alive, all survived acute TTP. Longest survival 5½ years to date. Relapse occurred in 2/2 patients who stopped HAART compared to 0/7 who continued. Both recovered following re-initiation of PE and HAART. vWF-cp levels were low at diagnosis in all patients and, in 4, increased as CD4 improved and HIV viral load fell.

Conclusions: We highlight the importance of HIV testing all patients presenting with TTP. Treatment with plasma exchange and HAART is associated with a high rate of complete remission. Relapse occurs if HAART is stopped.

P64

Opsoclonus-myooclonus syndrome following the initiation of HAART

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Opsoclonus-myooclonus syndrome (OMS) is a rare neuro-ophthalmological disorder usually considered to be either a paraneoplastic or post-infectious condition. We report a case of OMS in a 36-year-old HIV positive Caucasian woman. She presented with a week's history of dizziness progressing to an unsteady gait, shaking and vomiting. On neurological examination she was found to have opsoclonus, myoclonus of the arms and neck and truncal ataxia, the 3 hallmarks of OMS. Her CD4 count at presentation was 193 having risen from a nadir of 1 five months previously when she had reinitiated HAART after a three-year interruption. During this time she had been treated for *Pneumocystis carinii* pneumonia, salmonella septicaemia and cytomegalovirus infection. Extensive investigation failed to identify an associated neoplasm or precipitating infection. Her condition was not initially improved by clonazepam, sodium valproate or a 5-day course of intravenous immunoglobulin. Nevertheless she made a gradual and eventually almost full recovery over two months. OMS is thought to be immune mediated. The appearance of the condition following a rapid and steep rise in CD4 count suggests OMS could be a rare manifestation of Immune Reconstitution Inflammatory Syndrome (IRIS).

P65

Plastic specula: can we ease the passage?

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Aim: To investigate the effects of lubricating gel on the culture of *Neisseria gonorrhoeae*, and on *Chlamydia trachomatis* Strand Displacement Assay (SDA).

Introduction: With the increased use of disposable plastic specula, a common problem is friction on insertion. The perceived wisdom is that specula should be used without lubrication other than water; however this does not appear to be robustly evidence based.

Method: We looked at the effect of Aquagel on the culture of *N. gonorrhoeae* on 3 standard laboratory media. Varying dilutions of *N. gonorrhoeae* were created by taking different numbers of colonies and emulsifying them in 30 microliters of gel. They were then plated and incubated in the standard way and read after 48 hours. We also added 100 microliters of gel to the *Chlamydia trachomatis* SDA positive and negative controls, and ran the test as normal.

Results: There was found to be no inhibition of growth of *N. gonorrhoeae* by Aquagel at any concentration. The positive and negative chlamydia controls were also unaffected by the addition of gel.

Conclusion: We feel that the clinician should now feel more confident that if a difficult examination requires the use of a lubricant, the test results will not be compromised.

P66

Withdrawn as requested.

P68

Comparison of the sensitivity and acceptability of meatal swabs with endourethral swabs for *Chlamydia trachomatis* NAAT testing in men

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Aim: Accuracy and patient acceptability of meatal swabs compared to endourethral swabs for detecting *Chlamydia trachomatis*.

Method: 100 symptomatic men or chlamydia contacts recruited. Using standard urethral swabs meatal and endourethral swabs were collected and tested using Roche PCR C. trachomatis assay. Men completed questionnaire indicating swab causing least discomfort and time last urinated. C. trachomatis is diagnosed if both or either swabs tested positive

Results: 36 men had positive meatal and urethral chlamydia swabs and 4 had positive urethral swabs only. Both methods scored 100% specificity. The sensitivity of meatal swab was 90.0% (95% CI 80.7%–100%) and urethral swabs 100%. 93% of men considered meatal sampling caused the least discomfort. No difference between the sensitivity of meatal swabs in symptomatic and asymptomatic chlamydia positive men. No relationship between the time of last urination and meatal swab sensitivity.

Conclusion: Meatal swabs are more acceptable to men than endourethral swabs. Meatal swabs achieved high sensitivity, but the low lower 95% C.I. makes it unsatisfactory alternative to endourethral sampling. Meatal swabs may have place when endourethral swab is not tolerated and urine specimen unavailable. Design of a specific meatal swab may improve sensitivity. Additional assessment examining acceptability of self-collected swabs would be of value.

P67

A comparison of self-taken vulvo-vaginal and cervical samples for the diagnosis of *Chlamydia trachomatis* infection by PCR

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Background: The National Chlamydia Screening programme commenced in Cornwall in April 03 for under 25 year olds in Genito-urinary Medicine (GUM) and community venues, using Roche COBAS PCR diagnostics. Initially, urine samples were obtained in community sites and endocervical samples in GUM clinics. However, the rate of inhibitory results from female urines was unacceptably high (8%) and the positivity rate lower than from other anatomical sites. In January 04 self-taken vulvo-vaginal swabs became the preferred community collection specimen. We compared self-taken vulvo-vaginal and cervical samples for the diagnosis of *C. trachomatis* in GUM.

Methods: Women under the age of 25 were invited to obtain their own vulvo-vaginal sample initially, an endocervical sample was obtained during examination and the results compared.

Results. 333 women participated. The positivity rates for the 2 sampling sites are shown below.

	Vulvo/vag positive		Vulvo/vag negative	
Cervical positive	51	2	53 (91.4%)	
Cervical negative	5	275		280
	56 (96.6%)		277	

15.3% of samples tested were positive at both sites, 15.9% from the cervical site were positive compared to 16.8% vulvo-vaginal samples. There is no significant difference between positivity rates in cervical and vulvo-vaginal samples.

Conclusion: Self-taken vulvo-vaginal samples are an acceptable alternative to cervical samples for *C. trachomatis* diagnosis.

P69

Why we do not review NGU more than once?

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Background: Increasing workloads in GUM clinics necessitates re-evaluation of work practices. A recent article states that 34% of clinics in UK do not require male patients with NSU re-attend. A review of literature showed paucity of evidence for either practice. Traditional practice was evaluated.

Methods: Retrospective analysis of 1010 patients was done by reviewing files of men with non-gonococcal urethritis (NGU). Evaluated were: causative agents (chlamydia, anaerobes), cure rate at each review, sexual intercourse following treatment. Treatment policy is per UK guidelines. Retesting was done 3 weeks after therapy².

Results: 1010/1922 (52.5%) had NGU. Age range was 16.5-63 years. (mean=27.7). 25% had chlamydia (mean age=26.4) while 27% grew anaerobes.

Table 1: Reviews

Reviews	1	2	3	4
Number tested (% of eligible)	719(71%)	276(77%)	96(79%)	34(74%)
Had sexual intercourse (% of eligible)	359(50%)	146(53%)	52(53%)	17(50%)
Had further review (% not cured)	380(53%)	135(47%)	48(47%)	12(35%)
Had sexual intercourse (% cured)	38(5%)	17(14%)		
Had sexual intercourse (% not cured)	71(99%)	35(13)		

Conclusions: 1. Between 50% and 65% resolved at each review. 2. *Chlamydia trachomatis* was present in 25% and anaerobes in 27%. 3. Significant differences in cure rate was found between those who had and had not sexual intercourse following treatment (p<.0005).

P70

Prevalence of genital infection in women attending prior to termination of pregnancy (TOP)

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Background: Pelvic inflammatory disease occurs in up to 10% of women undergoing TOP and it is recommended that these women are screened for sexually transmitted infections (STIs) or given prophylactic antibiotics. In our area all patients are seen within the Department of Sexual Health (DOSH), offered a full STI screen including HIV, given prophylactic antibiotics and followed up if positive. We examine the prevalence of genital infections and HIV in this group.

Methods: The notes of women attending for TOP between 1st January 2004 and 31st December 2004 were analysed.

Results: Of 370 women who attended, 7 deferred their TOP and therefore 363 were offered screening, of whom 351 (96.7%) accepted. One hundred and sixty one infections were detected including 28 chlamydia infections, 6 cases of genital warts, and 1 molluscum contagiosum (MC). Of 355 women who accepted screening for HIV, 1 was positive. STIs were commonest in those aged 16–25 of whom 12% had chlamydia and 2.8% had warts or MC. All 28 patients with chlamydia were treated and recalled; 21 reattended of whom 1 required retreatment. Nine brought partners of whom 2 were also positive, and 7 others were known to have been treated elsewhere.

Conclusions: Women seeking TOP will accept screening for STIs and HIV, and have a high prevalence (9.9%) of these infections. Follow-up of positive patients is assisted by the screening process being carried out within DOSH but despite this only 75% of those requiring follow-up, attended. We intend to pilot a dedicated telephone follow-up clinic within the TOP service to try and address this need.

P72

Outbreak of gonorrhoea linked to internet use among men who have sex with men

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Aim: To investigate an increase in numbers of cases of gonorrhoea among men who have sex with men (MSM) where sexual contact had been arranged through internet chat rooms or cruising in a rural part of England between July and September 2000.

Methods: Case notes for all gonococcal diagnoses were reviewed using KC60 coding. Standard clinic operating procedures were followed to guide contact tracing and partner notification activity and contact network maps were constructed. A molecular method (NG-MAST) was used to genotype all available gonococcal isolates.

Results: Epidemiological data were available for 41 patients, and typing results for 38. Seven clusters of linked patients, predominately among MSMs, were identified. Each cluster included multiple sexual partners many of whom were unidentified or untraceable. Molecular typing confirmed all known epidemiological links. There was evidence of contact through internet chat rooms in two of these clusters, (the largest cluster of 18) and of cruising in an additional two clusters.

Conclusion: Acquisition of gonorrhoea and onward transmission within a rural town occurred through contact initiated via the internet or cruising, which has public health implications since they involve a high frequency of anonymous sexual contact and mixing of individuals from a wide geographical area.

P71

How molecular tests for gonorrhoea infection fit into a modernised genitourinary medicine service

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Background: The BD ProbeTec ET Strand Displacement Assay (SDA) test for gonorrhoea (and chlamydia) is reliable, acceptable, and increases laboratory efficiency. However it neither provides immediate results nor antimicrobial sensitivity data.

Method: To establish a clinical protocol for optimal test use, a retrospective audit was performed in 1587 consecutive patients (736 males, 851 females) attending the GUM clinic in Sheffield. The case records of 54 patients who tested positive for gonorrhoea (27 males, 27 females) were further reviewed to determine the presence of risk factors for gonorrhoea.

Results: All 27 positive males and 23 (85%) of 27 positive females had at least one risk factor for gonorrhoea. The 4 females without risk factors represented 15% of the gonorrhoea positive group, but only 0.47% of the tested women. Symptoms were the commonest risk factor and occurred in 93% males and 55% females.

Discussion: Gonorrhoea screening by SDA alone, using the chlamydia screening sample, is feasible for the majority of asymptomatic GUM patients. Assessment of specific risk factors in the routine patient history identifies those in whom additional tests for microscopy and culture should be taken. Only a few women missed by risk factor assessment require repeat examination and additional culture tests prior to treatment.

P73

Getting it right the first time: an audit of gonorrhoea management in a high prevalence area

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Aim: To audit the management of gonorrhoea in an area of high prevalence in light of the current revision of guidelines and rising anti-microbial resistance.

Method: A retrospective audit of all gonorrhoea diagnoses over a three-month period. Case notes were reviewed and data collected regarding demographics, site of infection, antibiotic sensitivity, treatment and outcome.

Results: There were 144 diagnoses: 93 men and 51 women. Black patients accounted for 69% of infections. All women and 92% men were heterosexual. Thirteen infections were resistant to initial antibiotic treatment. In three of these cases, patients (all male) did not re-attend despite being recalled, effectively receiving azithromycin only. Two men receiving azithromycin for NSU did not re-attend for gonorrhoea treatment. Test of cure (TOC) was done in 67% cases. DNA rates for TOC were 35% men and 19% women. There were 6 positive TOC's: 5 had evidence/high clinical suspicion of re-infection. Treatment of contacts was 0.24 per male patient and 0.52 per female.

Conclusions: This audit supports doubt over the utility of TOC and highlights the importance of appropriate initial therapy and sensitivity testing. Attempts to address the issues raised in this audit include: targeted patient information, maintaining open-access clinics and educating local GPs.

P74

Change from microscopy and culture to gonorrhoea strand displacement assay – is there an impact on clinical care?

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Aim: Strand displacement assay (SDA) is now our screening test for gonorrhoea, with microscopy reserved for cases of high gonorrhoea probability and culture as confirmation. We assessed the impact of this change on clinical care.

Methods: Case note review of 249 patients with gonorrhoea pre (OP, n=141) and post protocol change (NP, n=108). Data collected: sex, age, ethnicity, sexuality, symptoms, gonorrhoea SDA, microscopy and culture results, time to treatment and complications. Gold standard = positive gonorrhoea culture (gonorrhoea contacts presumed true positive SDA).

Results: Men – SDA sensitivity 98%, positive predictive value (PPV) 100%. Percentage treated on day 1 was no different (75.5% NP vs OP 76%).

Women – SDA sensitivity 100%, PPV 91.5%, false positive SDA 9.3%. SDA 100% PPV in higher risk women (SDA, microscopy and culture at presentation). Women treated day 1: NP vs OP – 41.8% vs 45.4% overall, 59% vs 60.9% asymptomatic; median time to treatment 25 vs 20 days; delayed treatment and subsequent PID 0% vs 5.6%. $p > 0.05$ for all comparisons.

Discussion: Use of SDA with selective microscopy and culture has not compromised patient care. The impact of false positive tests is difficult to quantify and positive gonorrhoea SDA results should always be confirmed by culture.

P76

The syphilis outbreak in Northern Ireland

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Background: The resurgence of syphilis has been well reported, with notable outbreaks in Brighton, Manchester, London and Dublin, predominately among men who have sex with men (MSM). We report here a similar outbreak in Northern Ireland.

Methods: Case notes were reviewed from 1st July 2000 to 31 March 2004 of all GUM clinic attendees to identify those who met the agreed criteria for primary, secondary or early latent syphilis. An outbreak control team was established to improve surveillance and partner notification.

Results: 96 individuals were diagnosed with syphilis, 83 were MSM. 16 indicated a contact in Dublin as likely source. 20 were identified through contact tracing. 4 had more than 1 episode of infection. Most (64) had 1 or 2 partners in the previous 3 months. 10 cases were HIV positive (8 aware of status).

Conclusion: Initially the contacts were mostly from Dublin, as the outbreak gained momentum syphilis was contracted within Northern Ireland. The cohort was not generally associated with high number of sexual contacts, multiple anonymous partners or specific locations. The challenge is to educate both patients and health care professionals as to sexual health issues, specifically the risk associated with casual oral sex by MSM.

P75

Syphilis outbreak in Walsall: epidemiology and lessons for control and prevention

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Aim: Review the epidemiology of the recent outbreak of syphilis and assess the risk taking behaviour among men who have sex with men (MSM).

Methods: Syphilis cases diagnosed at the department of genitourinary medicine (GUM) and at outreach screening at a sauna and a public house during a 12 month period beginning September 2003 were reviewed. Risk taking behaviour was assessed using a standardised questionnaire among men attending the sauna.

Results: Fifty IgM positive cases were diagnosed. Of the 39 males, 27 had acquired syphilis through heterosexual contact. Four cases were referred through outreach screening. Twenty-nine men and 4 women had primary syphilis while 11 patients were asymptomatic. Four heterosexual men reported commercial sex workers (CSW) as contacts. Six patients were HIV antibody positive of whom 2 seroconverted subsequently. Questionnaires were completed by 163 men, of whom 76% described themselves as MSM. Half the men reported having 2–5 sexual partners in the past month and 12% over 10 partners. Unprotected anal sex and oral sex was reported by 64% and 98% respectively in the past month. GUM services have never been used by 35% but 73% said they would use a service in the community such as the sauna. While 37% assumed that they were HIV negative, 53% assumed that their last sexual partner was HIV negative.

Conclusion: Syphilis outbreak was occurring in two separate settings. Targeted multifaceted outreach programmes to include community venues and CSW's are necessary to combat further spread.

P77

Syphilis in Nottingham - predominantly a heterosexual disease

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Aim: To describe the epidemiology and clinical features of the ongoing outbreak of infectious syphilis.

Method: Case-note review of all patients diagnosed with infectious syphilis between December 2002 and December 2004. Enhanced partner notification was implemented to identify network connections.

Results: Ninety-seven cases of infectious syphilis were diagnosed. Sixty-two cases were in men, of whom 46 (74.2%) were heterosexual. 3 gay men were HIV positive. Twelve men reported paying for sex. 9 of the 35 (25.7%) women were commercial sex workers (CSW). Six women were pregnant. A genital lesion was present in 70 cases (72%) at presentation. Skin signs were present in eighty-four (86.5%). 21 of 68 (30.8%) genital ulcers were painful or tender. Inguinal lymphadenopathy was prominent in 38 male cases. 24 of the 38 dark-ground (DG) examinations performed were positive. 5 men were DG positive VDRL negative at presentation. In 67 cases (69%) the diagnosis of syphilis was only established on receipt of serology results. **Conclusions:** Heterosexual transmission accounted for 83.5% of the cases in this local outbreak. Diagnosis relied heavily on serology despite the high prevalence of clinical signs. Close collaboration with local prostitute outreach project (POW) resulted in enhanced screening of CSWs.

P78

UK national audit of early syphilis management

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A national audit of 781 early syphilis cases presenting during 2002–03 in UK genitourinary medicine clinics was conducted in late 2004, organised through the Regional Audit Groups. Data were aggregated by Region, allowing practice in Regions to be compared to the UK national guidelines and national averages.

An EIA test was used to diagnose 89% of cases (regional range 18–100%) with highly variable use of other tests. A pre-treatment non-treponemal test (NTT) was obtained for 94% (50–100%). Uptake of HIV testing was 77% (69–94%). Overall, 67% of treatments were injected, with equal use of benzathine (50%, 0–97%) and procaine penicillin G (50%, 3–100%). Doxycycline comprised 85% (0–100%) of oral treatments. About 4% were not, or not known to be, treated. Treatment completion was recorded for 88% (71–100), resolution of lesions for 74% (40–96%), and a fourfold decline in NTT for 54% (37–70%). Only 35% (12–56%) had a negative NTT recorded at one year, mainly explained by non-attendance and other reasons. Contact tracing was provided for 87% (57–97%), and identified 997 traceable contacts of whom 511 (ratio 0.51, 0.26–0.70) were seen, and 215 (42% 3–73%) had syphilis.

Individual NHS Trust data aggregated by Regions were provided to Chairs of Regional Audit Groups.

P80

Topical 5% imiquimod cream in the management of anogenital warts unresponsive to four weeks of standard treatment

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Aim: To investigate the efficacy of topical 5% imiquimod cream in treating anogenital warts in cases non-responsive to 4 weeks of cryotherapy and/or topical podophyllotoxin solution.

Method: A prospective study using self applied topical 5% imiquimod cream 3 times weekly for 16 weeks, or resolution, whichever was sooner. Partial response assessed as equal or >50% reduction in wart area, poor response <50%.

Results: 61 patients recruited, 42 males and 19 females of which 16/42 and 11/19 were Afro-Caribbean respectively. Mean age 33. 8/42 males and 4/19 females were HIV positive. Amongst the males 18/42 (43%) had perianal warts alone. In the women 10/19 (52%) had vulval warts alone. Complete clearance rates were 34/61 (56%) of which 20/42 (48%) was male and 14/19 (74%) female. Median time to complete response was 4 weeks (range 1–18). 11/61 (18%) showed partial clearance with a median of 16 weeks use (range 8–26). 16/61 (26%) a poor response with a median 16 weeks use (range 4–22). Adverse events were observed in 11/61 (18%) and most commonly mild. One male experienced a severe reaction.

Conclusion: 5% imiquimod cream demonstrated good efficacy and was well tolerated. Complete responses were better in females with no ethnic differences observed.

P79

Women and men with herpes simplex (HSV) – telling a new partner and the impact on sexual relationships

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Aim: To assess the experiences of females and males with genital HSV when telling new partners and the outcomes of divulging this information.

Method: The Herpes Viruses Association (HVA) sent a postal questionnaire to all their members, including questions on their experience of the impact of HSV on their relationships and their partners' attitude.

Results: 200 individuals, 148 women, 52 men, responded. 39 females reported 39 rejections in 116 experiences when divulging their HSV status, 1/2.9 episodes. 12 men experienced rejection (19 times in 61), 1/3.2 divulgements. 107 people had never been rejected when telling 169 partners (52% and 55% of women and men respectively). Non-disclosure was reported by 14 women and 8 men, a non-significant difference. Non-disclosing men tend to be more recently infected. Most individuals reported having sex since their diagnosis and positive attitudes from their partners with a small proportion experiencing denial, judgemental or punitive attitudes. When asked if herpes simplex is more of a physical or emotional problem, both sexes find it more of an emotional problem.

Conclusion: Most individuals with genital HSV infection divulge this information to new partners and the majority experienced positive responses. There is a trend for non-disclosure amongst the recently diagnosed.

P81

Should all confirmed cases of *Chlamydia trachomatis* be referred to a genitourinary medicine (GUM) clinic?

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Aim: To assess the initial management of patients with confirmed chlamydia infection subsequently referred to GUM and to identify any benefits of referral.

Methods: Notes of 100 consecutive cases of *Chlamydia trachomatis* referred in from elsewhere (mainly general practice) in 2003 were hand searched. Treatment and contact tracing prior to referral, additional diagnoses made in GUM and number of further contacts identified, notified and treated as a result of referral were noted.

Results: Prior to referral 67% received appropriate treatment, 4% received inappropriate treatment and 24% received no treatment. 57% had at least one contact notified and 32% had at least one contact treated. In GUM clinic 53 additional contacts were identified. 34% of the clients referred had further contacts notified and 16% had further contacts treated. On referral 68% were already chlamydia –ve. 7% had an additional STI and 36% an additional non-STI diagnosis made.

Conclusions: The majority of cases of chlamydia infection can be adequately managed in primary care and routine referral to GUM may therefore not be justified.

P81a

Test > Text > Treatment: text messaging service (TMS) improves the time to treatment of *Chlamydia trachomatis* infection and reduces the cost of result provision

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Aim: To assess the impact of TMS on time to treatment for genital *Chlamydia trachomatis* (CT) infection and result provision.

Methods: Time from testing to diagnosis and treatment for patients with CT infection receiving results via text message (TG) was compared to a sex and age matched standard recall group (SG, n=21) over a six month period. Providing results in person, by phone and by text message were calculated to take 12, 4 and 1.5 minutes respectively. Economic calculations were based on a staff rate of £13/hr.

Results: Of 952 text messages sent, 28 were for untreated CT. The mean number of days (standard deviation) to diagnosis was significantly shorter in TG vs SG; 7.9 (3.6) vs 11.2 (4.7), $p < 0.001$. The median time to treatment was 8.5 days (range 4–27 days) for TG vs 15.0 (range 7–35) for SG, $p = 0.005$. By month 6, 46.9 less hours were required to provide equivalent result numbers (69.0hrs vs 115.9hrs for month 1) with a saving of £609/month.

Conclusions: Patients with genital CT infection are diagnosed and receive treatment sooner since the introduction of TMS. Significant savings in costs and staff time were seen following the introduction of this service.

P83

Chlamydial conjunctivitis resulting from direct ejaculation into the eye

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Background: The majority of cases of chlamydial conjunctivitis are thought to result from autoinoculation by the patient of infected genital secretions from themselves or their sexual partners. We noted that some patients had developed symptoms following direct ejaculation into the affected eye.

Methods: Retrospective casenote review of chlamydial conjunctivitis seen at the Diagnostic Clinic from 1995–2004, looking for a history of direct ejaculation into the eye.

Results: 4 cases of chlamydial conjunctivitis following ejaculation of semen directly into the eye were identified. The duration of onset of the eye symptoms was from 1 to 4 weeks, compared to experimental models where symptoms developed 2–19 days following inoculation of the organism. In only one case was chlamydia detected in the genital tract. In 3 cases, there was no evidence of genital chlamydial infection; the sources of the eye infection being either from infected genital material of their sexual partners transferred by hands to the eyes, or more likely from direct ejaculate inoculation.

Conclusion: Chlamydial conjunctivitis can result from direct ejaculation into the eyes. This mode of transmission may underestimated as a history of ejaculation into the conjunctiva is not normally asked for.

P82

Prevalence of chlamydia in patients attending for termination of pregnancy

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Introduction: Patients undergoing a Termination of Pregnancy (TOP) are routinely screened and prophylactically treated for chlamydia pre-operatively to prevent post operative salpingitis.

Is the prevalence of chlamydia in this population higher than those attending GU clinics?

Methods: GU and TOP case notes were analysed retrospectively over 1 year for diagnoses of chlamydia (via PCR) with respect to age of attendees.

Results: 2540 tests were done in GUM, 14.3% were positive. 369 tests were done pre TOP, 8.13% were positive. Age specific incidences were similar apart from 2 groups– a) patients less than age16 (GUM 9/55 were positive for chlamydia compared to TOP where 3/113 were positive, $p < 0.01$) and b) those aged 30 and over (GUM 50/746 were positive compared to TOP 0/103, $p < 0.01$), where a higher incidence was seen in GUM patients in both age groups.

Conclusion: In view of the lower incidence of chlamydia in TOP attendees, particularly in attendees over 30 years of age, further work is required to look at the cost effectiveness of chlamydia screening in TOP in this older age group.

P84

Microscopic cervicitis, will you treat?

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Background: Microscopic cervicitis is a controversial topic in GUM diagnosis and management.

Objective: To evaluate the clinical significance of microscopic cervicitis in the diagnosis of STIs.

Methods: 437 female patients attended the GUM clinic 1/5/04–30/6/04 and were examined. Of these, 105 were diagnosed as cervicitis as they had 10+ pus cells/HPF on cervical microscopy.

Results: Of these 105 patients, 88 were coded as C4H and 17 as C4A when laboratory results available. [5 of those coded as C4A were contacts of chlamydia (2), Gonorrhoea (1) and NSU (2)]. Another 6 were chlamydia positive with no cervicitis. Results of contacts of all female C4H patients will be shown. Also, details of co-existing infections.

Conclusion: 105 female patients were treated for microscopic cervicitis from a total of 437 patients examined, i.e. 24% of female clinic attenders. In this study, chlamydia was diagnosed nearly 3 times as often in patients with cervicitis (17), as those without (6). With the increase in GUM attenders and the increased number of STIs diagnosed, how should we manage cervicitis? Is treating and contact tracing a waste of resources, or is it an opportunity for preventing PID and tubal infertility?

P85

Lymphogranuloma venereum in HIV-positive homosexual men: is an outbreak emerging in London?

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Introduction: Recent outbreaks of *Chlamydia trachomatis* L2 genotype have been reported amongst gay men in Western Europe. Lymphogranuloma venereum (LGV) is associated with transmission of HIV infection.

Case report: We report the cases of five HIV positive men presenting to our clinics between November 2004 and January 2005. All presented with proctitis and 40% with perianal ulceration following unprotected passive anal sex. Four had sexual contacts outside the UK (Italy, Germany and Madeira). Three patients were antiretroviral (ART) naive and two were ART experienced with viral loads <50 copies/Molalla cases had positive rectal chlamydia nucleic acid amplification tests for *Chlamydia trachomatis* of the L2 genotype. All cases were successively treated with doxycycline. Three cases had concurrent rectal gonorrhoea and were treated with Ceftriaxone.

Conclusion: Given the outbreaks in Western Europe and the number of cases presenting to our clinic in recent months we conclude that increased awareness among clinicians is essential to facilitate early diagnosis, treatment and prevent onward transmission of both LGV and HIV. Close collaboration between clinic staff and those in microbiology has been vital.

P87

Telephonic follow-up of gonorrhoea: a step in the right direction

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Aim: To compare the outcome of management of gonorrhoea by test of cure with telephonic follow-up.

Methods: Data was collected from the case notes of patients with gonorrhoea managed between April and September 2003 using test of cure, and cases managed between April and September 2004 by telephonic follow-up.

Results: Patients was similar in terms of age, sex, sexual orientation in both the groups, but ethnic mix was different. There were more whites (30.3% vs 19.8%, p=0.004), less blacks (43.9% vs 56.5%, p= 0.003) and less other ethnic groups (12.9% vs 21.6%, p=0.007) in the telephonic follow-up phase than the test of cure phase.

	Test of cure (n=278)	Telephonic follow-up (n=271)
Patients treated within 28 days of diagnosis	55%	44%
Patients followed up within 28 days of treatment	58.7%	75.7%
Patients with overall satisfactory management	49.6%	70%
Mo of partners treated within 28 days		
0 partner	78.4%	69.7%
1 partner	20.5%	29.8%
2 partner	0.7% (n=2)	0.7% (n=2)
3 or more partners	0.0%	0.0%
Contacts per case		
Within 28 days	0.22	0.31
Within 90 days	0.22	0.31

Conclusion: Outcome of management of cases of gonorrhoea with telephonic follow-up is satisfactory and a step in right direction towards the modernization of GUM services.

P86

The demography of gonorrhoea in Wales – an analysis from the GRASP study

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Introduction: New cases of uncomplicated gonorrhoea seen at GUM clinics in England (reported on form KC60) decreased by 5% between 2002 and 2003. In Wales the number of cases diagnosed by GUM clinics increased by 29%. Welsh laboratory reports from Cardiff and Newport indicate a further increase in 2004. This report examines the increase in gonorrhoea seen in Wales (2000-2003) using data from GRASP (the sentinel surveillance system for gonococcal resistance to antimicrobials). Data from Cardiff GUM clinic includes 2004.

Results: The figures confirm a rise in the number of cases of gonorrhoea in Wales since 2001. The number of patients diagnosed with gonorrhoea from ethnic minorities in Wales (7% in 2003) is remarkably low when compared to data from all centres across England and Wales. Data from Cardiff demonstrate a 55% increase in the number of cases of gonorrhoea from 2003 to 2004. The increase occurs in all groups, the largest increase being in heterosexual males. The distribution of diagnosis in homosexual males (40% and 38% in Cardiff in 2003 and 2004 respectively) is notably high.

Conclusion: Gonorrhoea cases have continued to increase in contrast to national data, highlighting the necessity of local surveillance to inform public health.

P88

Gonorrhoea treatment response after change to treatment guidelines

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Aim: To assess the clinical and microbiological response to treatment of gonorrhoea following the change in national treatment guidelines for first line antibiotic therapy to cefixime or ceftriaxone, and to identify any cases of cephalosporin resistance.

Methods: Antibiotic sensitivities and clinical data were collected for all culture positive gonorrhoea infections identified over a four month period in three genitourinary medicine clinics.

Results: 198 cases were identified. Patients' mean age was 31.2 years, 174 (88%) were men, 112 (64%) were MSM. 83 cases (42%) were treated with cefixime, 78 (39%) with ceftriaxone, and 28 (14%) with ciprofloxacin. The incidence of chlamydia co-infection was 12%; 18 (75%) cases in men, 10 (56%) heterosexual. No isolates demonstrated resistance to cephalosporins, 11% were ciprofloxacin resistant, 6% penicillin resistant and 4% resistant to both penicillin and quinolones. 140 patients (70%) returned for follow-up, 134 (96%) were successfully treated becoming asymptomatic with a negative test of cure. 3 cases (2%) had positive gonococcal cultures following treatment, with no evidence of antibiotic resistance. Cause for treatment failure was unprotected intercourse with an untreated partner.

Conclusion: The use of cefixime or ceftriaxone for uncomplicated gonorrhoea infection is effective clinically and microbiologically with no cases of treatment failure.

P89

High rates of *Neisseria gonorrhoea* contacts abroad reduced partner notification

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Background: National guidelines for gonorrhoea recommend that at least 0.6 sexual partners should be verified as having been satisfactorily managed within four weeks. Previous studies carried out at this clinic have shown that partner notification for heterosexuals is significantly higher than for MSM.

Method: A prospective study was undertaken comparing the effectiveness of partner notification of casual partners of heterosexuals and MSM.

Results: 42 index patients with GC had casual partners. (19 MSM, 20 heterosexual males and 3 heterosexual females) Heterosexuals documented 42 casual partners over the previous three-month. MSM documented 34 partners but 18% of MSM failed to quantify the number of partners. Partner notification for casual partners was (0.24) and (0.04) for heterosexuals and MSM respectively. 76% (32/42) of heterosexual casual partners were non-contactable. Analysis of the barriers to partner notification indicated 86% (26/32) of non-contactable partners of heterosexuals were abroad, 77% (20/26) Asia. 14% of casual partners in Ireland were uncontactable. MSM who indicated their casual partners were uncontactable met their partner in Ireland.

Conclusion: This review concurs with previous findings, however more recently partner notification in heterosexuals is reduced secondary to significant sexual contact outside country of residence.

P91

Men with herpes simplex (HSV) - treatment and information satisfaction survey

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Aim: To assess levels of patient satisfaction with the management of their first episode of genital HSV.

Method: The Herpes Viruses Association (HVA) performed a detailed postal questionnaire of all their male members. Individuals were asked to detail their waiting time, first-episode management, treatment success and satisfaction with the information provided.

Results: 51 men responded (mean age 46.4, mean time since diagnosis 11.6 years). 41 were diagnosed in a GU clinic with an average delay (within the last 3 years) of 2.6 days, a figure that has not changed significantly over time. The majority received aciclovir tablets or no specific therapy; oral therapy yielded the highest satisfaction scores. The levels of satisfaction regarding information varied with a trend for patients to be less satisfied with information from their GP as opposed to GU clinic staff. 10/15 received no written information from their GP compared with 2/26 in a GU clinic.

Conclusion: Male patients attending GU services with a first episode of genital HSV are seen within 3 days. Oral aciclovir, the commonest therapy, led to high satisfaction scores. Even within specialist services a number remain unsatisfied with the information supplied and the provision of written information by GP services was poor.

P90

Syphilis causes eye disease – a case series

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Introduction: Co-infection with HIV alters the course, clinical presentation and serological findings of syphilis. A rapidly progressing ocular problem may be the presenting feature of either. We present a series of 5 cases of ocular syphilis seen in 2004.

Findings: All patients were male. Four were homosexuals. All presented with blurring of vision and were referred after there had been no response to standard ophthalmological treatment for uveitis. All had strongly positive syphilis serology. Three subsequently tested positive for HIV. The clinical presentation ranged from retinitis to anterior uveitis and will be illustrated. They responded to high dose intravenous penicillin/ceftriaxone/doxycycline, with steroid cover for first 48 hours to prevent Jarisch-Herxheimer reaction.

Discussion: Syphilis is becoming more common and ophthalmic involvement would be expected in 5–10% of patients. There are no pathognomic ocular findings of syphilis. A differential diagnosis includes infection, granulomatous and autoimmune disease. Ophthalmic involvement of syphilis should be considered as neurosyphilis and treated early with high dose intravenous penicillin.

Conclusion: Ocular manifestations of syphilis are likely to become more common and may be severe. Syphilis should be considered in the differential diagnoses of ocular inflammation, as delay in treatment can lead to permanent visual loss.

P92

A 5-year study of the trends in incidence and management of *Trichomonas vaginalis*

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Aim: To identify the incidence and management trends of trichomoniasis in a busy inner city clinic over a 5-year period.

Results: Over a five year period, the incidence of *Trichomonas vaginalis* was 40.4–55.8 per 1000 new women attending. The majority of cases were in the 21–30 age group. The predominant symptom was vaginal discharge (59.7–68%) and 20–25% of patients were asymptomatic and diagnosed through screening. Wet film microscopy within the department enabled the diagnosis in 76.2–87.2%. Culture alone enabled the diagnosis in further 10–14%. 25% of patients had a concomitant sexually transmitted disease (gonorrhoea 2.7%, chlamydia 14.7%, syphilis 4%). Most patients (92–96.6%) were treated with a single dose (2g) or a five day course (400mg bid) of metronidazole. In 1999, 51% of patients attended for follow-up appointments compared to 56% in 2003. 44.4–52% of patients had a negative test at follow up. 10–16% had recurrence within a year. Contact tracing was initiated at the time of diagnosis in 77.3%. Information regarding partner treatment was available for 18.7–23.6% of patients.

Conclusion: *Trichomonas vaginalis* remains a significant sexually transmitted disease in our locality which also has a high prevalence of HIV infection.

P93

The changing face of STIs in pregnancy in Limerick, Ireland over 15 years

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Background: Regional meeting of clinicians requested 'STIs in pregnancy' be discussed at next meeting.

Methods: Files of pregnant women and post partum to 6 weeks were manually searched (1987–2002) and audited.

Findings: 5%(217) were pregnant of which 21%(47) attended immediately post partum. 102/217(47%) were seen 2000–2002 of which 38(37%) were non nationals.

Attendance:

Year	Number	%
1987-1999	170	78.3%
2000-2002	47	21.7%
Total	217	100%

Sex	Number	%
Male	10	4.6%
Female	207	95.4%
Total	217	100%

Diagnosis	Number	%
Chlamydia	10	4.6%
Gonorrhoea	10	4.6%
Trichomonas	10	4.6%
Herpes	10	4.6%
Syphilis	10	4.6%
Other	10	4.6%
Total	217	100%

Conclusion: A large increase in foreign nationals is noted. Even in the most distal clinics increased clinical awareness of less common diagnoses and co-operation is essential to help prevent congenital transmission of preventable diseases.

P94

Immune reconstitution inflammatory syndrome (IRIS)-associated Kaposi sarcoma

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Background: Starting HAART occasionally reactivates indolent infections, a phenomenon known as immune reconstitution inflammatory syndrome (IRIS). We have identified a similar paradoxical deterioration in Kaposi sarcoma (KS) on starting HAART.

Methods: Since 1996, 300 patients were diagnosed for the first time with KS; 239 patients were HAART naive, and 150 were treated with HAART alone. We examined the clinicopathological details and clinical course of these patients.

Results: Ten of the 150 naive patients developed rapid clinical progression of KS within 2 months of starting HAART. All 10 patients developed new KS lesions and progression of established lesions. Moreover, the rate of progression of KS accelerated during this period compared to prior to starting HAART. There were no differences in KS stage or visceral involvement between the 10 who developed IRIS KS and the 140 who did not. Patients who developed IRIS KS had a higher CD4 count at start of HAART (median 335/mm³ vs 121/mm³ : p=0.028) but no difference in HIV viral load (median 295K/mm³ vs 171K/mm³ : p=0.35).

Conclusion: Patients with KS who start HAART may be at risk of IRIS progression of KS

P95

Similar high frequency of detection of PPD-specific CD4+ lymphocytes in broncho-alveolar lavage in HIV positive and negative patients with active TB

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Introduction: In HIV-infected individuals diagnostic difficulties frequently lead to delays in TB treatment. Lung-derived CD4+ lymphocytes producing interferon-gamma (IFN-γ) in response to PPD have been demonstrated at high frequencies in HIV negative TB patients. This assay may have diagnostic utility. We sought to investigate its performance in HIV-infected individuals.

Methods: Broncho-alveolar lavage (BAL) was performed on patients with various respiratory conditions. BAL was incubated overnight with PPD or no antigen and CD4 lymphocytes producing IFN-γ measured by flow cytometry.

Results: BAL from 33 HIV positive individuals with a median blood CD4 count of 131 cells/μl (6-661 cells/μl) was analysed and compared to BAL from 64 HIV negative individuals. Median frequency of PPD response for culture-confirmed TB were: HIV+ 7.13% (n=15; 0.00–67.11%) versus HIV- 13.94% (n=19; 0.12–79.32%). Median TB culture negative response: HIV+ 0.01% (n=18; 0.00–16.12%); HIV- 0.67% (n=45; 0.00–45.66%). Frequency of PPD response was similar at high and low blood CD4 counts in the HIV-infected population.

Conclusion: A similar high frequency of CD4+ lung lymphocyte responses to PPD are demonstrated in HIV positive and negative subjects, even in the presence of marked CD4 lymphopenia. This lung-orientated, rapid immunological technique may have diagnostic utility in all patients with TB.

P96

Hepatitis B vaccine service: staying on top of the audit cycle

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Aim: To assess the impact of audit recommendations on the Hepatitis B vaccine (HepBvax) service.

Methods: The delivery of the first and third dose of HepBvax to all eligible MSM was audited across four clinics on four occasions. Recommendations were made and implemented after each audit. The Sexual Health Strategy targets of 80% and 50% for the 1st and 3rd HepBvax dose became effective at the end of 2004.

Results:

Year	Number eligible for HepBvax (%)	1st dose HepBvax Number (%)	3rd dose HepBvax Number (%)	Audit Recommendations
2004	158 (100%)	131 (83%)	88 (54%)	Introduce Post-clinic testing (POCT) for HBsAb (HBsAg)
2002	144 (100%)	115 (80%)	72 (50%)	Multidisciplinary responsibility
2001	122 (100%)	82 (67%)	31 (25%)	Introduced HepBvax at 0, 7 and 21 days
2000	140 (100%)	81 (44%)	NA	1st dose HepBvax on initial visit Nurse led delivery by PCP

In 2004, 27% of eligible MSM requested to wait for serology results prior to vaccination. However, almost half of these individuals did not return.

Conclusions: Clear audit recommendations to modernizing service delivery have improved vaccine uptake over three audit cycles. Introducing POCT could capture those patients who currently defer vaccine until their serology result is known.

P97

Does hepatitis B ultra-rapid vaccination work in HIV-positive people? A comparative study of HIV-positive and HIV-negative vaccine recipients

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Aim: To assess ultra-rapid hepatitis B vaccination in HIV+ and HIV-patients.

Methods: A retrospective analysis of individuals prescribed the ultra-rapid vaccination regimen (0,1,3 weeks) in 2004 who had post-vaccine antibody levels.

Results: 22 HIV+ and 34 HIV- individuals met the entry criteria. There was an excess of women (13/22, 59% vs 9/34, 26% $p=0.02$) and black people (16/22, 73% vs 5/34, 15% $p<0.001$) in the HIV+ vaccinees. Response rate (anti-HBs $>10\text{iu/l}$) was lower in the HIV+ individuals (11/22, 50% vs 30/34, 88% $p=0.004$) although this response is similar to longer vaccination schedules. Approximately equal numbers of patients actually received three injections either during >2 months ('rapid') or <2 months ('ultra-rapid'). The differences between HIV+ and HIV- remained for ultra-rapid (8/12, 67% vs 16/17 94% n.s.) and rapid recipients (3/10, 30% vs 14/17, 82% $p=0.01$). Ultra-rapid achieved better results than rapid vaccination in the HIV+ (8/12, 67% vs 3/10, 30% n.s). This difference is explained by CD4 count: 7/8 (88%) and 3/3 (100%) ultra-rapid and rapid responders but only 1/4 (25%) and 3/7 (43%) non-responders had a CD4 count >350 cells/mm³.

Conclusion: Ultra-rapid vaccination of HIV+ people seems to be as effective as longer schedules in terms of early antibody response.

P99

Prevalence of hepatitis C in urban sexually transmitted infections (STI) clinic for men who have sex with men (MSM): is screening necessary and is it cost effective?

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Background: Outbreaks of HepC in MSM, especially those with HIV co-infection have recently been reported. This study reports the prevalence of HepC in a community based screening programme and evaluates its cost-effectiveness.

Methods: From Jan-Dec 04 all MSM attending a community based MSM Sexual Health Clinic were screened for Hepatitis C Abs by Ortho EIA assay. Positive tests were confirmed by RIBA.

Results: 1258 MSM were screened, 1389 tests performed. 28 men tested positive for HIV. 2 men screened + for HepC; 1 positive by Ortho EIA, but not confirmed on RIBA3, was reported negative. The only confirmed positive case was in a man who had a previous sexual partner who was an IVDU. HepC PCR was +, HIV1/2 ab negative. The prevalence rate was 0.07%. The cost of screening for the year was 19,737 euro, personnel costs not included.

Conclusion: The prevalence of Hepatitis C in HIV negative MSM is low even in the context of a recent local syphilis epidemic and rising rate of HIV in this population. Generalised screening is not cost effective in this population however targeted testing in those with a sexual history identifying increased risk (IVDU/ partner IVDU) and in HIV+ cases remains important.

P98

Comparison of two accelerated hepatitis B vaccination schedules – completion and immune response

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Introduction: It is accepted that the two accelerated vaccination schedules for hepatitis B are equally efficacious. This study was designed to compare vaccinations at 0,7,21 days (schedule-A) and 0,1,2 months (schedule-B) examining completion rate of course and the development of adequate immunity i.e. hepatitis B surface antibody (anti-HBs) $>10\text{IU/L}$ at two months after the third vaccine.

Method: A retrospective analysis of 264 patient records.

Results: Schedule-A 140 patients, (86males). Schedule-B 124 patients, (87 males). The groups were equally matched for age, immune status and indication for vaccination. 73% of schedule-A completed vaccination compared with 64% schedule-B (not significant (NS)). Anti-HBs was checked in 61% of schedule-A compared with 70% schedule-B (NS). Schedule-A had 60% anti-HBs $>10\text{IU/L}$ compared with 76% in schedule-B (significant $p=0.055$).

Conclusion: This study shows that the two schedules have no significant difference in completion rates, and no significant difference in attendance for antibody check. The anti-HBs response is significantly lower with the 0,7,21 vaccine. The widespread use of this schedule should now be reconsidered.

P100

Treatment and outcomes of HCV treatment in HIV-HCV co-infected patients 2001–2004

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Background: With the use of HAART increasing morbidity/mortality from HCV mediated end stage liver disease in HIV populations is recognised. Pegylated interferon and ribavirin (PEG/RBV) use has been associated with an increased sustained virological response (SVR).

Objective: To identify primary and secondary treatment outcomes of HCV treatment.

Results: Demographics: 89% male, 63% IVDU, 27% haemophiliac, 42% genotype 1/4, 58% genotype 2/3, 55% on HAART, mean CD4 $507 \times 10^6/\text{l}$. 62 patients commenced PEG/RBV. 54 completed treatment with an end of treatment response of 37/54 (69%) [genotype 1/4=6/19 (32%) and genotype 2/3= 31/35 (89%)]. 46 reached 6/12 post treatment. SVR seen in 28/46 (61%) [genotype 1/4=4/16 (25%) and genotype 2/3=24/30 (80%)].

OT analysis: SVR seen in 27/42 (64%) (genotype 1/4=4/15 (27%) and genotype 2/3= 23/27 (85%). 11/62 discontinued treatment because of psychiatric morbidity (n=4), sustained significant CD4 decline (n=1), non-treatment related death (n=2). Two patients required dose reduction, 14 received haematological support (erythropoietin 9, transfusion 2, GC-SF 6).

Conclusions: SVR rates compare favourably to mono-infected data. Increased awareness of HCV treatment toxicities, use of supportive growth factors to enable use of full dose HCV therapies and knowledge of HAART interactions enable favourable therapeutic outcomes.

P101

Treatment outcomes of hepatitis C intervention with pegylated interferon and ribavirin in hepatitis C/HIV co-infected haemophiliacs

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Aim: To examine the primary and secondary outcomes of hepatitis C treatment in co-infected haemophiliacs.

Method: In 2001 an open-label treatment study was commenced. All patients were initially treated with 24 weeks of pegylated interferon and ribavirin; those with genotype 1/4 infection received a further 24 weeks of treatment providing they were HCV-PCR negative. Primary endpoints were HCV-PCR negative at the end of treatment (EOT) and at 6 months post completion of treatment i.e. sustained viral response (SVR). Secondary outcomes were discontinuation or dose reduction due to adverse drug reactions, need for haematological support and interactions with HAART. 62 patients have received treatment, 17 of whom are haemophiliac.

Results: Of 17 patients, 10 had genotype 1/4 disease and 7 had genotype 2/3. 83% were HCV-PCR negative at EOT (100% genotype 2/3, 60% of genotype 1/4). Overall SVR is 53% (genotype 2/3:86%). 18% were non-responders, all genotype 1. No patient required dose reduction or had interactions with their HAART. There was one case of thyroiditis and 17% required haematological support to maintain full dose therapy.

Conclusion: Pegylated interferon and ribavirin is an effective and well tolerated treatment in co-infected haemophiliacs.

P103

HCV-specific T-cell responses of acutely HCV infected individuals with and without HIV

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Aims: To assess HCV-specific T-cell responses and serum cytokines in HIV-positive and HIV-negative individuals with acute HCV infection.

Methods: Frozen PBMCs and serum from multiple time points in the acute phase of HCV infection from a cohort of HIV-positive individuals in London and an Italian cohort of HCV mono-infected individuals were used. HCV-specific T-cell responses were assessed using an IFN- γ ELISpot for HCV core derived peptides (20mers overlapping by 10aa) and HCV recombinant non-structural proteins (NS3-5). Serum cytokines were analysed using cytokine bead array and FACS analysis.

Results: HIV-positive individuals (n=12, all male, mean age 33, mean CD4 714 cells/ml) were compared with 10 HCV mono-infected (n=10, 6 male, mean age 40) individuals. Comparison of IFN- γ ELISpots for NS3-5 proteins revealed significantly reduced responses in HIV-positive vs. HIV-negative individuals (1/10 vs. 5/7, p=0.034). No difference was seen for the core peptides (3/10 vs. 5/7, p=ns). In HIV-positive individuals cytokines (pg/ml) compared at peak ALT and >2 months post-peak ALT revealed significant late increases in: INF- γ (108.9 \pm 34.5 vs. 154.5 \pm 32.7, p<0.01), TNF (7.7 \pm 2.9 vs. 10.9 \pm 2.3, p<0.01) and IL-2 (3.3 \pm 0.4 vs. 3.6 \pm 0.4, p<0.01).

Conclusions: Failure of early immunological control of HCV in HIV-positive individuals is supported by the lack of breadth of the CD4 responses to the non-structural proteins and late elevation of cytokines.

P102

Use of pegylated interferon-alpha (peg-IFN) with or without ribavirin in the treatment of acute HCV in HIV-positive individuals

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Aims: To describe the virological outcomes of two different treatment strategies for acute HCV infection in HIV infected individuals.

Method: HIV-positive individuals presenting with acute HCV infection at two centres were offered treatment but with different standard regimens. At centre 1 all individuals persistently positive for HCV RNA by reverse transcriptase polymerase chain reaction (PCR) 12 weeks after presentation were offered peg-IFN alpha 2b (1.5 μ g/kg) and ribavirin (>10.6 mg/kg) for 48 weeks. At centre 2 individuals were offered immediate treatment with peg-IFN alpha 2a or 2b for 24 weeks. Ribavirin (800mg/d) was added in individuals still positive for HCV RNA at week 12.

Results: Baseline characteristics were similar in individuals at centre 1 (n=24) and centre 2 (n=15): mean age (35.7 Vs 36.3 years), CD4 count (583 Vs 515 cells/ml), HIV viral loads (30% Vs 20% <50copies), HCV genotype 1 or 4 (83% Vs 87%), and ALT (177 Vs 362IU/ml). Sustained clearance rates were available in 23 patients and were significantly better at centre 1 (60%) than centre 2 (8%) p<0.001. Side effect profiles were similar.

Conclusions: The optimal treatment schedule for acute HCV in HIV co-infection is not known but our experience suggests that peg-IFN alone has poor efficacy.

P104

Hepatitis C (HCV) screening: what should genitourinary medicine be doing?

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Objective: To improve the effectiveness of HCV screening in GUM.

Method: The indications for tests requested over a six month period were audited against national guidelines. Reasons for inappropriate testing, and risk factors for all diagnosed HCV cases were determined. Risk factors for all HCV cases over four years were also collected. The guidelines were modified to limit testing to: All IDU; Long-term sexual contacts of known HCV positive individuals; All HIV positive patients at initial diagnosis. This was implemented and the audit repeated.

Results: 174 tests for HCV were requested over the initial six months. 62% complied with national guidelines. 50% of inappropriate tests were sexual contacts of IDU. We identified 10 new cases, 8 were IDU and 1 HIV positive. No patient who is thought to have acquired HIV heterosexually from someone of WHO pattern 2 origin and who denied intravenous drug use (29 patients) was co-infected with HCV. 90% of cases of HCV diagnosed over four years were IDU. Implementing modified guidelines resulted in 50% fewer requests, 9 new cases, all IDU.

Conclusion: Using our modified guidelines we would not miss cases of HCV and we reduced unnecessary requests by 50%.

P105

HIV-associated T-cell non-Hodgkin lymphoma

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Background: T-cell non-Hodgkin's lymphoma (T-NHL) accounts for <10% NHL and has only recently been found to have an increased incidence in HIV+ people. The management of HIV-associated T-NHL is uncertain.

Methods: Since 1986 we have managed 317 HIV+ patients with lymphoma including 62 primary cerebral NHL, 24 Hodgkin's disease, and 231 systemic NHL. We compared the clinicopathological features and outcomes of patients with systemic T-NHL and B-NHL.

Results: We identified 10 patients with T-NHL. There were no significant differences in gender (χ^2 p=0.57), age (MW p=0.16), prior AIDS defining illness (χ^2 p=0.43), NHL stage (χ^2 p=0.28), CD4 cell count (MW p=0.25) or HIV-1 viral load (MW p=0.62) at NHL diagnosis. Aggressive NHL is classified using the International Prognostic Index; there was no difference in the distribution of IPI scores (χ^2 p=0.33). There is no difference in overall survival (log rank p=0.40). The 2 year overall survival is 32% (95%CI: 27-39%) for B-cell NHL and 46% (95%CI: 14-78%) for T-cell NHL.

Conclusion: There were no differences in immunological parameters or survival duration between patients with T-NHL and B-NHL. We suggest that aggressive T-NHL could be included as an AIDS defining malignancy along with high grade B-NHL.

P107

Pulmonary Kaposi sarcoma in era of HAART

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Background: The survival following a diagnosis of Kaposi sarcoma (KS) has improved dramatically since the introduction of HAART.

Methods: Since 1996, 301 patients have been diagnosed for the first time with KS, including 26 with pulmonary KS (pKS). The clinicopathological features and outcome of patients with pKS are compared with those without pulmonary involvement.

Results: Patients with pKS were more often female (all black Africans) (15% vs 4% χ^2 p=0.006) and were younger (mean age 36 vs 39 MW p=0.02). They had lower CD4 cell counts (median 33/mm³ vs 128/mm³ MW p=0.009) but similar HIV plasma viral loads (MW p=0.8). All patients were treated with chemotherapy and HAART. The 5 year overall survival for patients with pKS is 49% (95%CI: 24-74%) compared to 82% (95%CI: 77-87%) for KS patients without pulmonary involvement (log rank p<0.0001).

Conclusion: The median survival for pKS is 1.6 years in this cohort which compares favourably with quoted rates of 3-10 months from the pre-HAART era. However, the prognosis of pKS remains poor and is significantly worse than for KS without lung involvement.

P106

Hodgkin's disease in the era of HAART – single institution experience

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Background: Although not AIDS defining, Hodgkin's disease (HD) occurs at increased frequency in the HIV+ population and was previously associated with a poor outcome.

Methods: We reviewed our experience of HD since 1996 when HAART was introduced into routine clinical care.

Results: We have treated 17 patients (16 male) for HIV associated HD. The mean age is 42 years and 4 (24%) had a prior AIDS defining illness. At diagnosis, the median CD4 count was 175/mm³ (range 49-661) and 11 (65%) were on HAART of whom 7 (64%) had an undetectable HIV viral load. Most had advanced HD at presentation: 10 (59%) had stage IV disease, 14 (82%) had B symptoms and 8 (47%) had bone marrow involvement. This compares to values of 15%, 40% and <5% in the general population with HD. All patients were treated with combination chemotherapy. One patient was treated at relapse with high dose chemotherapy and autologous stem cell transplantation. The actuarial 2 year survival is 79% (95%CI: 58-100%). Four patients have died, 2 from HD and 2 from other causes.

Conclusion: Even in the HAART era, patients with HD present with advanced stage disease, however the survival for these patients is improving with aggressive therapeutic strategies.

P108

No cardiotoxicity observed with liposomal anthracyclines for Kaposi sarcoma

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Background: Anthracyclines are associated with cumulative cardiotoxicity due to free radical peroxidation of cardiolipids in myocytes. Cardiotoxicity is characterised by dilated cardiomyopathy. The recommended maximum lifetime cumulative dosages of non-liposomal anthracyclines are 450 mg/m² for doxorubicin and 600 mg/m² for daunorubicin.

Method: We measured the lifetime cumulative dosages of liposomal anthracyclines delivered to patients with AIDS-Kaposi sarcoma (AIDS-KS) and the incidence of clinically significant cardiac failure.

Results: We have treated 93 patients with AIDS-KS (90 male, 2 female, 1 gender reassignment) whose mean age is 39 years (range 24-62) with liposomal anthracyclines. Liposomal anthracyclines were the first line systemic chemotherapy for 78 (84%). Fifty eight patients were treated with liposomal daunorubicin (Daunoxome), 30 with pegylated liposomal doxorubicin (Caelyx) and 5 with both. The median cumulative doses received were 120mg/m² (range 20-520) for liposomal daunorubicin and 240mg/m² (range 80-760) for pegylated liposomal doxorubicin. The maximum cumulative dosage delivered to a single patient was 640 mg/m² liposomal daunorubicin plus 160 mg/m² pegylated liposomal doxorubicin. The actuarial 5 year survival from commencing liposomal anthracycline chemotherapy is 73% (95% confidence interval: 61-85%).

Conclusion: We have observed no clinically significant episodes of cardiotoxicity amongst this cohort of patients despite high cumulative dosages of liposomal anthracyclines.

P109

Clinicopathological features of 12 cases of HIV-associated multicentric Castleman's disease

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Background: The diagnosis of HIV-associated multicentric Castleman's disease (MCD) is often delayed due to non-specific clinical findings.

Methods: We examined the clinical features of 12 patients with MCD diagnosed or treated at our institution.

Results: The mean age was 39 years (range 31-49) and 11 were male. Five (42%) had prior AIDS defining illness and 8 (67%) had cutaneous KS. All had lymphadenopathy and PUO and 10 /11 splenomegaly (1 prior splenectomy for ITP). Two (17%) had effusions and 5 (42%) pulmonary infiltrates. The median symptom duration was 5 months (range 2-24). At presentation 11 (92%) were anaemic (Hb<10g/dl), 8 (67%) thrombocytopenic (Plt<100x10⁹/l). 9/10 had polyclonal gammaglobulinaemia (median IgG 29 g/l, range 5-59, normal range 5-16) and all had low albumin (<35g/l). The median CD4 count was 197/mm³ (range 65-1429), CD8 was 881/mm³ (range 310-5661) and CD19 was 228/mm³ (range 8-554). Only 2 had undetectable HIV-1 viraemia, although 8 were on HAART at MCD diagnosis. Three (25%) also had plasmablastic microlymphoma associated with MCD. Seven patients have died and the median survival is 6 months.

Conclusion: The rather non-specific clinicopathological features at presentation may account for the prolonged duration of symptoms prior to diagnosis of MCD.

P111

Virological outcome for individuals with HIV/tuberculosis co-infection receiving highly active antiretroviral therapy

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Aim: To describe the virological response to HAART in TB/HIV patients. **Methods:** Retrospective case-note review of 115 consecutive individuals with HIV/TB co-infection.

Results: At TB diagnosis, patients had a median CD4 count 132 cells/uL (3-1200); viral load 365,000 copies/mL (50-750,000). TB treatment was rifamycin-based in 113/115. 84/115 (73%) patients received HAART during TB treatment (1/3 were on this at TB diagnosis). Time from anti-TB therapy to starting HAART if HAART naive: <2 weeks=12/59 subjects (20%); 3-4 weeks=7/59 (12%); 5-8 weeks=22/59 (37%); 9-16 weeks=12/59 (20%); 17-24 weeks=6/59 (10%). 18 different HAART regimens were prescribed: PI containing n=26; NNRTI containing n=45; triple NRTI n=13. 69/84 (82%) achieved a viral load <50 copies/ml by the end of TB treatment, similar to our non-TB HAART treated individuals. Viral load response was not related to specific regimen type. 5/15 who did not achieve <50 copies/ml had a >2 log fall in HIV load and were felt to be responding slowly; giving a total response of 74/84 (88%). 10/15 had a <1 log fall in HIV load.

Conclusions: Good virological responses are seen in the majority of our cohort, demonstrating that anti-tuberculosis and anti-retroviral therapy can be successfully combined.

P110

Under-reporting of tuberculosis among HIV-infected individuals diagnosed in the UK

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Background: HIV is fuelling the TB epidemic in high HIV prevalence populations. Both infections are on the increase in the UK with over 6000 new diagnoses of each reported per year. We reviewed national trends and matched cases of AIDS with TB at diagnosis to the national TB database to assess under-reporting.

Results: The proportion (and number) of AIDS cases with TB at initial diagnosis increased from <5% (59/1577) in 1992 to 30% (233/766) in 2003. TB has drawn level with PCP as the most common initial AIDS defining illness. 88% of black-Africans diagnosed with AIDS presented with tuberculosis in 2003 (compared to 2.3% of MSM). Almost 40% of AIDS cases with TB at initial diagnosis reported (1998-2001) could not be matched to the TB surveillance system, ranging from 36% in 1998 to 42% in 2001.

Conclusions: TB is now a leading cause of HIV related morbidity in the UK. High co-infections among black-African individuals reflect the high prevalence of HIV and TB in their country of origin. Although estimates are subject to matching limitations, the high proportion of under-reporting of tuberculosis among HIV individuals is concerning and warrants further investigation.

P112

Intravenous pentamidine is inferior to trimethoprim-sulphamethoxazole for treatment of *Pneumocystis jirovecii* pneumonia (PCP)

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Background: Trimethoprim-sulphamethoxazole (TMP-SMX) is first-line treatment for (PCP). Few data are available to guide choice of second-line treatment for patients who fail or who are intolerant of first-line therapy.

Methods: Treatment data and outcome from 1145 episodes of HIV-associated PCP (1035 patients) presenting between January 1989 and June 2004 were analysed to identify if specific treatment was associated with 3-month mortality. Patients were from Copenhagen (555), London (375) and Milan (215).

Results: First-line therapy was TMP-SMX in 928, IV pentamidine (PENT) in 82, clindamycin/primaquine (C+P) in 67 and 'Other' (dapson/TMP), atovaquone or inhaled PENT) in 65. Outcomes for first-line treatment [response rate/treatment switch for toxicity/switch for treatment failure/mortality at 3 months] were TMP-SMX: 78%, 17%, 5%, 14%; IV PENT: 53%, 27%, 20%, 19%; C+P: 56%, 26%, 18%, 16%; 'Other' 57%, 12%, 31%, 3%. For patients receiving second-line treatment multivariate Cox regression analysis of risk of death (95% CI) at 3 months was IV PENT = 3.2 (2.2-4.6), C+P = 1.1 (0.6-1.8), 'Other' = 0.7 (0.3-1.4).

Conclusion: Compared to TMP-SMX treatment of PCP with IV PENT has a 3.2-fold risk of death at 3 months, which is due to its inferior efficacy as first and second-line therapy.

P113



P115



P114



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