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O13.6 CIGARETTE SMOKING IS ASSOCIATED WITH AN ALTERED METABOLIC PROFILE IN THE VAGINAL TRACT

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Introduction Cigarette smoking is strongly associated with bacterial vaginosis (BV) and a low-*Lactobacillus* vaginal community state type (CST). Metabolite profiles have previously been shown to delineate BV and non-BV women and appear to be influenced by microbial composition. Therefore, we sought to determine if vaginal metabolites varied between smokers and non-smokers within each stratum of CST.

Methods Forty reproductive-aged women (20 smokers/20 non-smokers) were recruited. Vaginal bacterial composition was characterised by 16S rRNA gene analysis. Metabolic profiles were determined by GC/MS and LC/MS and compared to libraries of known metabolites. Data were analysed with Random Forests, a method that uses decision trees to rank metabolite importance.

Results We identified 619 metabolites from mid-vaginal swab eluates – three-fold more than previously described in the vagina. Women were categorised into CST-I (*L. crispatus*-dominated), CST-III (*L. iners*-dominated) and CST-IV (low-*Lactobacillus*/high anaerobes). Metabolites were strongly separated by CST ($F = 3.0855$, $P_{PERM} = 0.0001$). Within each CST, significant differences in metabolic profiles of smokers and non-smokers were evident. Nicotine and the breakdown metabolite cotinine was higher in smokers versus non-smokers from all CSTs. Smokers in CST-I had higher concentrations of xanthosine and paraxanthine. Smokers in CST-III were reduced in their relative concentrations of N-stearoyltaurine and 4-methylcatechol sulfate. Biogenic amines agmatine, cadaverine and spermidine were increased in smokers from CST-III and IV. Smokers from CST-IV had higher concentrations of kynurenate, 3-methyl-2-oxovalerate and palmitoyl ethanolamide.

Conclusion The metabolite profile of the vaginal tract is strongly influenced by the vaginal microbiota. Detection of nicotine and breakdown products in the vagina may serve as molecular biomarkers of smoking. Kynurenate and biogenic amines have known roles in lymphocyte proliferation and inflammation and may indicate bacterial immune- and stress-resistance. Our results suggest that smoking affects several important metabolites present in the vagina that may have implications for women's health.

Disclosure of interest statement We declare no conflict of interest.

O14 - Increasing access to and uptake of sexual health care

O14.1 IS AN AUTOMATED ONLINE CLINICAL CARE PATHWAY FOR PEOPLE WITH GENITAL CHLAMYDIA (CHLAMYDIA-OCCP) WITHIN AN ESEXUAL HEALTH CLINIC FEASIBLE AND ACCEPTABLE? PROOF OF CONCEPT STUDY

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Introduction UK health strategy supports self- and internet-based care. Within the eSTI^2 consortium (www.esti2.org.uk) we developed UK's first automated Online Clinical Care Pathway for people with genital chlamydia (Chlamydia-OCCP) within an eSexual Health Clinic (eSHC). Chlamydia-OCCP includes: STI results service; clinical consultation; electronic prescription via community pharmacy; partner notification (PN); with integral telephone helpline support. It complies with regulatory, professional, prescribing and surveillance requirements. We report on a study to assess Chlamydia-OCCP feasibility and acceptability as an alternative to routine care.

Methods Non-randomised, exploratory study to evaluate Chlamydia-OCCP: 21.07.14 -13.03.15.

Participants: 1) chlamydia-positive untreated Genitourinary Medicine (GUM) clinic attenders; 2) people testing chlamydia-positive and negative through six National Chlamydia Screening Programme (NCSP) areas' online postal self-sampling service. Exclusions: under 16 yrs; co-existing STIs, extra-genital chlamydia. Intervention: eligible people were sent an SMS message with a link to access results from eSHC via a password protected web-app, optimised for smartphone use. Having consented online chlamydia-positive users followed the automated Chlamydia-OCCP. Patients who declined received routine care.

Evaluation: treatment rate; time to treatment; PN outcomes; engagement with clinical helpline and health promotion; safety; acceptability, costs.

Results GUM: of 197 eligible patients, 161 accessed results online, 112 consented, 110/112 (98%) treated (72 exclusively via Chlamydia-OCCP, median 1 day). NCSP: of 145 eligible patients, 133 accessed results online, 104 consented, 92/104 (88%) treated (59 exclusively via Chlamydia-OCCP, median 1 day).

28/515 sexual partners were managed solely online. 1176/1936, (61%) NCSP chlamydia-negative people accessed results online, of whom 407 accessed online health promotion. All patients who didn't access results online were managed routinely. Patients moved effectively between online, telephone and clinic-based care.

Conclusion Chlamydia-OCCP is a feasible, acceptable, safe alternative to routine care for management of people with genital chlamydia. Preliminary evidence indicates comparable treatment outcomes. If linked to home testing, Chlamydia-OCCP offers potential for wholly remote care.

Disclosure of interest statement Nothing to declare.