

P3.063* TRENDS OF NEUROSYPHILIS DURING A SYPHILIS EPIDEMIC IN BRITISH COLUMBIA, CANADA: IT OCCURS EARLY, NOT LATE?

doi:10.1136/sextrans-2013-051184.0523

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Background We sought to determine if the population increases in neurosyphilis cases in British Columbia, Canada were attributable to early (infectious) versus late (tertiary) syphilis stage of diagnosis by examining concordance of trends in syphilis by stage of disease and neurosyphilis diagnosis.

Methods Data were extracted from the provincial STD database that includes all syphilis diagnosis in British Columbia through a centralised programme, and where diagnoses are confirmed by physicians with syphilis expertise. Early syphilis was defined as either secondary (rash or mucous lesions), or early latent syphilis (asymptomatic with a negative or lower RPR titre within the previous year). Late latent syphilis and tertiary neurosyphilis diagnoses were defined by laboratory and clinical interpretation by experienced physicians. We excluded primary syphilis for this analysis since neurosyphilis does not occur during this stage. Trends in syphilis by stage and diagnosis were compared.

Results Overall rates of syphilis diagnosis increased from 2.0/100,000 in 1993 to 10.1/100,000 in 2012. Early syphilis increased over the same time period from 0.4/100,000 to 6.4/100,000 and neurosyphilis diagnoses increased from 0.03/100,000 (1 case) in 1993 to 0.8/100,000 (35 cases) in 2012. There was a major recent fluctuation in early syphilis diagnosis, with a 56% decline in 2009–2010, followed by a 231% increase in 2011–2012. At the same time, a similar pattern of neurosyphilis diagnoses trends occurred, with a 65% decline in 2009/10 and 225% rise in 2011/12. In contrast, while late syphilis fluctuated modestly over this time period it remained generally stable (Range 1.3–2.9/100,000 with minimal increase).

Conclusion Neurosyphilis diagnoses generally mirrored early (infectious) syphilis rates at the population level, suggesting the majority of neurosyphilis in this epidemic occur during early rather than late stage infection. This has important implications on education and management strategies for syphilis control programmes.

P3.064 PATTERNS OF SEXUAL PARTNER ACCRUAL AMONG ADOLESCENT WOMEN

doi:10.1136/sextrans-2013-051184.0524

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Background Younger age and number of sexual partners are consistently identified STI risk factors, but the relative contributions of chronological age and total interval since first coital partner to accrual of partners has not been established in prospective studies.

Methods Participants (N = 341; 14–17 years of age at enrollment; 90% African American) were English-speaking adolescent women from lower- and middle-income families residing in areas with high rates of pregnancy and STI. We collected quarterly sexual behaviour data for an average of 3.56 years (range 0.23–8.92 years). Median number of lifetime partners increased from 2 at enrollment to 6 at the last visit.

Generalized Additive Mixed Models were used to estimate the cumulative number of partners as a function of time covariates. The cohort effect (enrollment age), the longitudinal effect (follow-up period) and their interaction were considered as predictors. Annual rate of the partner acquisition was estimated by the first derivative of the cumulative number of partners with respect to the “follow-up period”.

Results Partner accrual was 2 or more partners per annum within the first 2 years of follow-up, but slowed down to about 1 partner per annum during the years 2 to 5 since enrollment. Rates of partner accrual were similar for all age groups at enrollment and declined at similar rates. Correlation between “enrollment age” and “age at first sex” was 0.26, possibly an indicator of STI and contraceptive care-seeking associated with sexual activity.

Conclusions Cross-sectional studies of STI risk among adolescents may confound age-related cohort effects with variation in interval since first sexual intercourse. Our analysis shows that higher rates of partner accrual decrease within two years regardless of the age of first coitus. This suggests that STI prevention based on delay of coitus among adolescent women should be supplemented with efforts to reduce rates of partner accrual.

P3.065 PARTNER-CONCURRENCY ASSOCIATED WITH HSV-2 INFECTION IN YOUNG SOUTH AFRICANS

doi:10.1136/sextrans-2013-051184.0525

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Objectives While much is known about the individual level risk factors for HSV-2 infection, little is known about why only some populations develop generalised HSV-2 epidemics. This study aims to assess the extent to which partner-concurrency (a factor which operates at both the partnership- and network-level) may be responsible.

Methods We utilised multivariate logistic regression to analyse the relationship between HSV-2 seropositivity and potential risk factors in data from a representative cross-sectional survey of 14–24 year olds from a township in South Africa.

Results The overall prevalence of HSV-2 was 53.3% among women and 17% among men. For men four factors remained significantly associated with HSV-2 infection in the multivariate regression analysis; total number of sex acts, being a migrant labourer, Zulu ethnicity and being HIV positive. For women eight factors were associated with HSV-2 infection; increasing age, partner concurrency (having a partner who had other partners), an older partner, total number of sex acts, using hormonal contraception, Xhosa ethnicity, syphilis seropositivity and being HIV positive.

Conclusion Partner-concurrency is associated with increased HSV-2 seropositivity in women.

P3.066* RATES AND TRENDS OF PELVIC INFLAMMATORY DISEASE AND ECTOPIC PREGNANCY IN ENGLAND UP TO 2011: WHAT CAN THESE DATA TELL US ABOUT CHLAMYDIA EPIDEMIOLOGY AND CONTROL?

doi:10.1136/sextrans-2013-051184.0526

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Background Chlamydia trachomatis (CT) is one cause of pelvic inflammatory disease (PID) and ectopic pregnancy (EP). Rates of CT testing and diagnosis have increased since the 1990s, especially following full implementation of the National Chlamydia Screening Programme in 2008. We investigated PID and EP trends in the context of increased chlamydia screening.

Methods Rates of clinical PID among 15 to 44 year old women were calculated using the Clinical Practice Research Datalink (CPRD, diagnoses from a sample of primary care sites) for 2000–2011. Diagnoses were classified as ‘definite’, ‘probable’ or ‘possible’ PID according to the assigned medical codes. Incidence of EP per conception among 15–44 year old females was calculated using the CPRD and the Inpatient Hospital Episode Statistics (HES) (1998–2011).

Results The rate of 'definite/probable' PID was highest among 20–24 year olds (410/100,000py; 95% CI: 399–308). Between 2000 and 2011, the rate of 'probable/definite' cases among women declined in all age groups; on inclusion of 'possible' cases, rates of PID increased over the analysis period. Rates of EP (which were similar in HES and CPRD) were fairly stable overall between 1998 and 2010 (10.5/1,000 conceptions). EP rates increased with age and trends differed by age group, with decreases among women aged 30 years or older and small increases among < 30 year olds.

Conclusions We observed homogeneity in declining rates of 'definite/probable' PID in all ages, but heterogeneity in EP trends by age. Interpreting trends in CT sequelae is complicated by diagnostic coding (PID), delays in sequelae onset (EP), variation in incidence by age and multiple aetiologies. EP trends in young women should become more informative in coming years for the evaluation of the impact of chlamydia screening. The likelihood of causes other than CT screening leading to changes in EP and PID need to be carefully assessed.

P3.067 PREVALENCE OF CHLAMYDIA TRACHOMATIS AND NEISSERIA GONORRHOEAE IN HIGH SCHOOL STUDENTS BETWEEN 14 AND 19 YEARS-OLD USING A NON-INVASIVE TECHNIQUE

doi:10.1136/sextrans-2013-051184.0527

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Introduction Chlamydia trachomatis (Ct) and Neisseria gonorrhoea (Ng) are two of the most prevalent sexually transmitted infections (STI) in the world and affect mostly women younger of 25 years old causing sequels in their sexual health and fertility.

Objective to determine the prevalence of Ct and Ng of high school students in the centre area of the Cundinamarca, Colombia and associated factors for their infection.

Methods a cross-sectional study was developed. 1875 students between 14 and 19 years old of high school were identified in 11 small cities of a Colombian state. The selected students filled out a survey and gave a sample of urine for the detection of Ct and NG using real-time PCR. Before the survey, sexual health lectures were given to students, teachers and parents.

Results a sample of 972 sexually active students was obtained. The prevalence of Ct was 2.24% (1.28–3.19 95% CI) and Ng 0.09%. (0%–0.28% 95% CI) No coinfection was detected. 21.4% of the girls with CT were asymptomatic (3/14). A association was identified between Ct and gender (chi2: 5.2, p:0.024), consume of psychoactive substances during the last sexual intercourse (chi2 4.4, p: 0.048) y previous diagnosis of STI of their partner (chi2: 9.0; p: 0.006). 34.1% of the men and 79% of the women with Ct or Ng reported at least one symptom of STI in the last 3 months.

Conclusions This is the first study in Colombia using non-invasive techniques for the detection of Chlamydia and gonorrhoea. The prevalence of Ct and the frequency of asymptomatic cases were below compared with other studies. This can be explained because the area of the study is rural and some studies have shown differences between rural and urban areas. The population has a high frequency of symptoms which can be associated to other STIs and genital infections

P3.068 PRIMARY SYPHILIS IS ON THE RISE IN GREECE: EPIDEMIOLOGICAL DATA FOR THE PERIOD 2005–2012 FROM A TERTIARY REFERRAL CENTRE IN ATHENS

doi:10.1136/sextrans-2013-051184.0528

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Background We conducted a retrospective study based on patients' records of the Sexually Transmitted Infections Unit of "A. Sygros" Hospital in Athens, Greece. This is a tertiary referral centre for sexually transmitted infections from an area that has almost half the population of Greece.

Methods We focused on Primary Syphilis (PS), having confirmed the diagnosis both clinically and serologically. We documented the total annual number of patients, the male/female ratio, and the patients' ethnic origin and sexual orientation.

Results We reviewed 1184 patients over the last eight years. The total number of patients with PS has risen from 111 in 2005 to 157 in 2012, an increase of 41.44%. The mean annual number is 144. The mean male/female ratio is 4.85, with a peak value of 8.50 in 2011. The majority of patients are of Greek origin, ranging from 67.4% to 87.2%. Within the male patients group, it seems that the percentage of homosexuals has risen steadily from 2005 (20.7%) up to 2011 (59.0%) with a decline in 2012 (46.0%). The mean value over eight years is 45.03%.

Conclusion PS in Greece is on the rise. This is probably related to moving populations because of immigration and sex trade. Changes in sexual behaviour can also be a factor. However, the majority of patients are Greek, despite immigrant influx. Men are the most numerous subgroup among PS patients, representing more than 80% of the total number of patients. Furthermore, there seems to be a trend towards predominance of homosexual men as the core group among male patients.

P3.069 ENHANCED OROPHARYNGEAL AND RECTAL TESTING FOR NEISSERIA GONORRHOEAE AND CHLAMYDIA TRACHOMATIS AT A PUBLIC STI CLINIC

doi:10.1136/sextrans-2013-051184.0529

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Background Saint Louis, Missouri (USA) consistently reports high per capita rates of *Neisseria gonorrhoeae* (GC) and *Chlamydia trachomatis* (Ct). Asymptomatic testing for these STIs has traditionally involved genital testing alone. U.S. screening guidelines recommend GC/Ct testing at all sites of sexual exposure in men who have sex with men (MSM) and other high-risk groups. We instituted a policy to promote extragenital screening, in addition to genitourinary screening, for higher risk patients in a public health STI clinic. The purpose of this study is to assess implementation of this programme as well as the prevalence of STI at each site in our population.

Methods We conducted a retrospective study to compare rates of GC and Ct under enhanced testing conditions (genital plus rectal/pharyngeal if exposed) from October 2012–January 2013. As part of the routine intake interview, patients presenting for testing were asked about sexual history and behavioural information.

Results Of 441 patients seen during the study period, 68.9% (N = 304) were tested at an extragenital site. Among persons undergoing extragenital testing, 99.7% (N = 303) had an oropharyngeal test, and 7.2% (N = 22) had a rectal test performed. Extragenital testing showed that 4.6% of patients (N = 14) had oropharyngeal GC, 1.0% (N = 3) had oropharyngeal Ct. Of the patients that underwent rectal testing, 9.1% (N = 2) had GC and 4.5% (N = 1) had Ct. Oral GC was found in 20.0% of patients with genital gonorrhoea (N = 15). In addition, 12.0% of the positive tests were in patients that had negative genital site testing.

Conclusion Implementation of an enhanced GC/Ct testing policy identified significant numbers of patients with isolated oropharyngeal and rectal infection. The incidence of men with concurrent genital and oropharyngeal GC as well as the predominance of men accounting for the discordant oropharyngeal GC infection, may indicate the need for increased oropharyngeal testing in the general population.