

Women's Sexual Health Review

Making Education Easy

Issue 2 - 2009

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Welcome to the second edition of **Sexual Health Research Review**, a unique New Zealand publication bringing you some of the most important sexual health research from around the world every quarter.

This issue is a summary of what we think are some of the most significant new papers in women's sexual health, in addition to local commentary on why they are important and how they can potentially affect practice. Review of the women's sexual health trials is provided by Dr Helen Roberts (Senior Lecturer in Women's Health at the University of Auckland and Research Manager for Family Planning in Auckland), Dr Min Lo (Sexual Health Physician at Auckland Sexual Health Service) and Dr Nicky Perkins (Sexual Health Physician and Lead Clinician Auckland Sexual Health Service).

The Review also provides website links to the abstract or fully published papers so you can make your own judgements.

The creation of this publication would not have been possible without support from our sponsor and to them we give our thanks. If you have colleagues or friends within New Zealand who would like to receive our publication, send us their contact email and we will include them next issue. We hope you find this edition stimulating reading and look forward to hearing your comments.

Kind regards,

Dr Chris Tofield

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Improvement of endothelial function with metformin and rosiglitazone treatment in women with polycystic ovary syndrome

Authors: Jensterle M et al

Summary: This study compared the effects of metformin and rosiglitazone on endothelial function in women with polycystic ovary syndrome (PCOS). 26 women were included in the study and received either metformin or rosiglitazone for 6 months. Endothelium-dependent flow-mediated dilation and endothelium-independent dilation of brachial artery were measured at baseline and at endpoint. Endothelium-dependent dilation of brachial artery improved from 4.2% at baseline to 10.2% after treatment in metformin recipients ($p = 0.036$) and from 2.9% to 7.6% in rosiglitazone recipients ($p = 0.026$); no significant between-group differences were observed. Endothelium-independent dilation of brachial artery did not change in either group. In conclusion, metformin and rosiglitazone were equally effective in improving endothelial function in women with PCOS.

Comment: It is not appropriate to use results of studies with surrogate outcomes to influence clinical practice, particularly in the area of cardiology where complex interactions of many factors take place. We need to wait for results of randomised trials with clinical outcomes.

Reference: *Eur J Endocrinology* 2008;159(4):399-406

<http://dx.doi.org/10.1530/EJE-08-0507>

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Increased access to emergency contraception: why it may fail

Authors: Baecher L et al

Summary: This study used multivariable logistic regression analysis to examine why increased access to emergency contraception (EC) did not reduce the number of pregnancies in a randomised controlled trial. The clinical trial involved 1490 sexually active women who were randomised to either increased or standard access to EC. Compared with women in the standard access group, women in the increased access group were more likely to use EC repeatedly. Women at low baseline risk for pregnancy in the increased access group were 10-times more likely to use EC repeatedly than low-risk women in the standard access group. High-risk women in the increased access group were only 5.5-times more likely to use EC repeatedly than high-risk women in the standard access group. In conclusion, it is likely that the clinical trial failed to show benefits from increased access to EC because the increased access had a greater impact on women who were at lower risk of pregnancy anyway.

Comment: Giving advance supply of the ECP to women using condoms and the pill is good practice. However other research tells us that, even when available, the ECP may not be used after every act of unprotected sex. The reason quoted being "I did not think I could get pregnant at that time". So there is still a lot of work to be done giving the correct information e.g. where in the pill packet is there the greatest pregnancy risk if pills are missed (answer: the first week after the 7-day break). What is interesting if you look closely at the exclusion criteria for this study is that women using long acting contraceptive methods such as IUD were excluded. I think this gives us a very important message – these are the most effective contraceptives because there is no user failure.

Reference: *Hum Reprod* 2009; 24(4):815-819

<http://dx.doi.org/10.1093/humrep/den460>

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In vitro testing of rationally designed spermicides for selectively targeting human sperm in vagina to ensure safe contraception

Authors: Jain RK et al

Summary: This study investigated the in vitro specificity and safety of 2 rationally designed spermicides DSE-36 and DSE-37. Both agents killed 100% sperm in <30 sec at spermicidal EC₁₀₀ and induced apoptosis in sperm in 3h at EC₅₀. However, at EC₁₀₀ these molecules had no effect on HeLa cells after 24h, or on cell viability, surface ultrastructure and reactive oxygen species (ROS) generation. In contrast, nonoxynol-9 (spermicidal EC₁₀₀ 500 µg/ml) decreased HeLa cell viability at 20 µg/ml in 24h (p < 0.001), damaged cell surface ultrastructure, and induced apoptosis and ROS generation. Nonoxynol-9, but not DSE-36 or DSE-37, significantly induced mRNA levels of pro-inflammatory biomarkers in HeLa cells and inhibited lactobacillus growth at EC₁₀₀. In conclusion, these novel spermicides kill sperm quickly at low concentrations and are likely to be better active ingredients for vaginal contraceptives than nonoxynol-9.

Comment: This is exciting news. We are now no longer prescribing or suggesting use of condoms with nonoxynol-9 as there is the potential for increased acquisition of HIV. The spermicides DSE-36 and DSE-37 seem to be protective of vaginal mucosa and don't affect lactobacilli while killing sperm. The next step is to see the contraceptive efficacy of in vivo studies.

Reference: *Hum Reprod* 2009; 24(3):590-601

<http://dx.doi.org/10.1093/humrep/den415>

Independent commentary provided by Dr Helen Roberts (Senior Lecturer in Women's Health at the University of Auckland and Research Manager for Family Planning in Auckland), Dr Min Lo (Sexual Health Physician at Auckland Sexual Health Service) and Dr Nicky Perkins (Sexual Health Physician and Lead Clinician Auckland Sexual Health Service)

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What female patients feel about the offer of a chaperone by a male sexual health practitioner

Authors: Simanjuntak C et al

Summary: This study canvassed the views of female patients offered a chaperone for a genital examination by a male sexual health practitioner. Female patients seen by male practitioners at the Melbourne Sexual Health Centre between November 2007 and January 2008 were given an anonymous survey. Of the 79 patients who declined the offer of a chaperone, none of them reported feeling uncomfortable declining the offer. Some of the participants appreciated being offered a chaperone even if they did not want one, and their decision to decline a chaperone was influenced by the professional attributes of the practitioner. Only 8% of participants felt uncomfortable when asked if they would like a chaperone. In conclusion, these findings suggest that, when a female patient declines the offer of a chaperone within a sexual health clinic, this is a true expression of her feelings.

Comment: Half the women asked in this survey wished to have a chaperone. In the main those who declined appreciated being asked and were comfortable about declining. One of the references quoted in this study suggests making a record if this offer is refused and this would seem reasonable advice. At Auckland DHB it is strongly recommended as safe practice that doctors of either gender ask if a chaperone can be present during sensitive examination and documentation if the patient does not wish this to occur. I am involved with teaching pelvic examination to medical students. Policy here is clear: they must always have a senior staff member present when doing these examinations and again they are advised to have a chaperone present in their future practice.

Reference: *Int J STD AIDS* 2009;20:165-167

<http://dx.doi.org/10.1258/ijrsa.2008.008277>

Side effects from the copper IUD: do they decrease over time?

Authors: Hubacher D et al

Summary: The copper intrauterine device (IUD) may cause increased uterine bleeding and pain in some women, necessitating early removal. This analysis examined side-effects data from a prospective study involving 1947 first-time copper IUD users to see if the side effects diminish with time. Most bleeding and pain side effects during menses were found to decrease over time ($p < 0.05$). Overall spotting and pain complaints between menses did not change with time, but the number of affected days increased ($p < 0.05$). Patterns for serious side effects prompting a clinic visit or IUD removal varied over time depending on the problem. In conclusion, some side effects from the copper IUD improve over time, while others do not.

Comment: We know that periods can be heavier with IUD use. Being able to tell women that this improves with time will help to increase continuation rates. These are already high, around 80% at 1 year. This compares to 50% of women at 1 year who have stopped using the injection and more than a third who stop the pill. It is now recognised that long acting methods of contraception such as IUDs and implants are the most effective at preventing unintended pregnancies.

Reference: *Contraception* 2009; 79(5):356-362

<http://dx.doi.org/10.1016/j.contraception.2008.11.012>

Primary health care providers surveyed commonly misinterpret 'first void urine' for chlamydia screening

Authors: Lusk MJ et al

Summary: This Sydney survey of general practitioners and ED doctors assessed their understanding of the term first void urine (FVU) when used for chlamydia screening. The survey found that the term FVU has ambiguous meaning that may result in incorrect urine sampling and therefore ineffective screening. Only 4.3% (95% CI 0.5–14.5%) of GP and 6.9% (95% CI 0.9–22.8%) of ED doctors correctly understood the term FVU. 68.1% (95% CI 52.9–80.9%) of GPs surveyed and 37.9% (95% CI 20.7–57.7%) of ED doctors incorrectly interpreted FVU to mean the first urine void of the day. In conclusion, the findings of this survey highlight the need for clear, standardised terminology for urine chlamydia screening if the chlamydia epidemic is to be controlled.

Comment: This is a nice simple study done in Sydney that acknowledges the confusion that exists about the correct way of doing a chlamydia First Void Urine (FVU). FVU is defined as the first 20-30ml of urine passed at least 1 hour after the last void, and is the optimal sample for chlamydia testing by Nucleic Acid Amplification Testing (NAAT) because it ensures collection of any organisms/DNA which have accumulated in the urethra and in vaginal discharge accumulating around the vulva, since the last void, thereby enhancing the sensitivity of the test. This study shows that a significant proportion of those surveyed misinterpreted the term, and the authors point out that this misinterpretation could hinder chlamydia screening efforts in that patients may not be tested at the time of presentation. Patients are often not instructed to collect the "first part of the urine stream" or reminded that the sample needs to be taken at least 1 hour after last passing urine. To add to the confusion, FVU is also sometimes described as First Pass Urine (FPU) or First Catch Urine (FCU), and the authors suggest renaming the FVU the ISU (initial stream urine) with a clarifying statement to accompany this. This seems sensible, and it would also be important to standardise this terminology across various guidelines and recommendations in order to maximise the success of chlamydia screening and testing.

Reference: *Int J STD AIDS* 2009;20:165-167

<http://dx.doi.org/10.1258/ijrsa.2008.008277>

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Non-sexually related acute genital ulcers in 13 pubertal girls

Authors: Farhi D et al

Summary: This study assessed the features of acute genital ulcers (AGU) in female adolescents. 13 immunocompetent female patients (mean age 16.6 years) with a first flare of non-sexually transmitted AGU were assessed for clinical features, sexual history and microbiology at baseline and again after 1 year. 11 of the 13 patients denied previous sexual contact. 77% of the patients had fever or flu-like symptoms preceding AGU, with a mean delay of 3.8 (range 0-10) days before AGU onset. Four patients were subsequently diagnosed with Epstein-Barr virus primary infection and 1 with Behçet disease; no other infections were detected. In conclusion, we recommend serologic testing for Epstein-Barr virus in non-sexually related AGU in immunocompetent patients.

Comment: The title of the article is potentially confusing as it refers to non sexually related causes of ulcers, rather than non sexually active young females. Two of the 13 patients in this group had previous sexual contact and 11 had not. Think of non sexually related causes of ulceration when you see young adolescent females with acute genital ulceration, especially if the patient has not been sexually active in the preceding 3 months. In this review article, approximately a third of cases were due to acute mononucleosis [EBV], and the rest were idiopathic. Serology for EBV capsid antigen (VCA) IgM and IgG antibodies should be done on a serial basis demonstrate seroconversion, as well as other workup for STIs. There is a tendency to over diagnose genital herpes in this group and such a diagnosis carries serious psychological consequences. This is an excellent up to date prospective observational study and literature review on the causes and investigation of acute genital ulceration in young adolescent females.

Reference: *Arch Dermatol* 2009;145 (1):38-45

<http://archderm.ama-assn.org/cgi/content/abstract/145/1/38>

Chlamydia trachomatis infection: the efficacy and safety of a fast track referral and treatment system

Authors: Sethupathi M et al

Summary: This report described the introduction of a fast-track referral and treatment system for patients with chlamydia and their contacts. Asymptomatic patients were treated without being testing and were asked to return for full screening in 4-6 weeks. 226 men and women were included in the report, 140 of whom attended follow-up. 27 (19.2%) patients were re-treated for either chlamydia (6 patients) or non-specific genital infection or because they had unprotected intercourse with an untreated or only partially-treated partner. In conclusion, the fast-track service was found to be safe and effective.

Comment: The authors evaluated a nurse/health advisor led Fast Track Service (FTS) where patients (and contacts) diagnosed with chlamydia in O&G clinics, general practice, FPA and other non sexual health clinic settings can see a nurse or health advisor at a sexual health clinic for rapid treatment without having to wait for an appointment. The authors opted for a Test of Cure which is not routinely recommended in international guidelines if treatment is with a first line regimen such as doxycycline or azithromycin. There were 6 treatment failures found from the Test of Cure results; of these, 5 were treated with doxycycline and although data was not presented on compliance this is a good illustration of the usefulness of one dose regimens such as azithromycin. Contacts of chlamydia were not tested when seen by the clinic staff, which seems like a lost opportunity since a urine chlamydia test is easily obtained. This FTS works well in the UK where nearly all sexual health-related matters are dealt with in sexual health clinics and not in general practice, and where waiting time for appointments can be considerable. In NZ, access to care may not be such an issue, as many STIs are diagnosed and treated in a general practice setting and same day appointments for evaluation and treatment at sexual health clinics are easily obtained.

Reference: *Int J STD AIDS* 2009;20:184-187

<http://dx.doi.org/10.1258/ijsa.2008.008321>

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Screening pregnant women for chlamydia: what are the predictors of infection?

Authors: Chen MY et al

Summary: This prospective study examined the sensitivity and selectivity of risk factors associated with chlamydia in pregnancy. 1044 pregnant women aged 16-25 years completed a questionnaire and provided a first-pass urine specimen for chlamydia testing. 3.2% of the women had chlamydia (95% CI 1.8-5.9). A multiple logistic regression model found that >1 sexual partner in the past year was associated with chlamydia infection (adjusted odds ratio 11.5; 95% CI 7.1-18.5) and the use of any antibiotic in the past 3 months was associated with a decreased risk (adjusted odds ratio 0.2; 95% CI 0.1-0.6). Restricting screening to women with >1 sexual partner in the past year would have detected 44% of infections, with only 7% of women needing to be screened. In conclusion, selective chlamydia screening of pregnant women based on risk factors can improve the yield from screening.

Comment: This is an interesting Australian study where the authors screened young pregnant women in Victoria for chlamydia. The most important risk factors identified were reporting a new sexual partner, unplanned pregnancy and not being in a regular relationship, surprise surprise. The authors state that if screening for chlamydia in pregnancy was limited to women with more than 1 sexual partner in 1 year, and women aged 20 or under, 72% of chlamydia infections would be identified and only 27% of women would need to be screened. However, this paper is best viewed as an academic exercise in teasing out those identifiable factors that would increase the likelihood of getting a positive chlamydia result from screening. If this targeted screening approach were adopted one would have to be confident that Lead Maternity Carers would routinely take a full sexual history and accurately identify risk. Even then a number of infections would be missed, resulting in the possibility of adverse pregnancy outcomes and neonatal morbidity. Sexually Transmitted Infection screening in pregnancy should ideally be universal and not targeted to those with perceived risk.

Reference: *Sexually Transmitted Infections* 2009;85:31-35

<http://dx.doi.org/10.1136/sti.2008.030700>

Confidentiality and access to sexual health services

Authors: Ryder N et al

Summary: This study investigated the importance of confidentiality to clients of a public sexual health clinic. 270 new English-speaking clients completed a self-administered questionnaire on confidentiality issues. One-third of respondents gave confidentiality and cost as 2 of their top three reasons for choosing a sexual health clinic rather than a GP; over half included expert care in their top 3 reasons. Most clients (>90%) said they would give accurate identifying information to the clinic and were generally comfortable with disclosure of information to other health-care workers. There were few associations with gender or sexuality. In conclusion, confidentiality (but not anonymity) is important to most clients of sexual health clinics.

Comment: Why do patients choose to attend a sexual health clinic over their general practitioner? We often presume it is for a desire to remain anonymous, but this study shows that patients place more importance on seeking expert care and free or low cost treatment. They are willing to share details such as their correct name if their information being kept confidential.

Reference: *Sexual Health* 2009; 6(2):153-155

<http://dx.doi.org/10.1071/SH08078>



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