Hong Kong J. Dermatol. Venereol. (2020) **28**, 82-86

Journal Watch

Reviewed by CW Chow 周志榮, CC Koh 許招財, AHW Wong 王慶榮, CK Wong 黃之鍵

Genital tract infections in HIV-infected pregnant women in South West London

Hegazi A, Ramskill N, Norbrook M, Morgan T, Dwyer E, Elgalib A, et al.
Int J STD & AIDS 2020;31:587-92.

In this retrospective study, the case notes of HIV-infected pregnant women who had attended four South London HIV Centres over a 10-year period (1 January 2004 - 1 January 2014) were reviewed. There were 384 cases (median age 32 years (interquartile range [IQR] 27-36) in which 598 pregnancies were identified. Ninety-six percent (n=346) were heterosexually infected. HIV was diagnosed in 77.9% of pregnancies before conception and antenatally in the remaining 22.1% of cases. The ethnicity of the cases (n=384) were as follows: Black African 77%; White-British 9.1%. Country of birth was as follows: born in sub-Saharan Africa 75%; UK-born 14%. There was a regular male partner reported in 95% of pregnancies (n=539); median relationship duration (n=347): four years (IQR 1.5-7.0); and additional sexual partners were reported during the pregnancy in 11/324 (3.4%) women. Most of the pregnancies (279/507) were reported to be unplanned with termination of pregnancy performed in 42 cases. An initial sexually transmitted infection (STI) screen was performed in 76.6% (n=427) of women. This was performed in the first trimester in 52.1%; and this was repeated in 32.1% of women during the pregnancy, mainly in the third trimester (96%).

At least one STI was diagnosed during pregnancy in 61 (14.3%) women, with *Trichomonas vaginalis* and *Chlamydia trachomatis* diagnosed in 2.6% and 1.6% of cases respectively. Other diagnoses included vaginal candidiasis and bacterial vaginosis which were found in 27.6% and 21.7% of pregnancies respectively. Spontaneous miscarriage occurred in 45 pregnancies. There were two documented cases of HIV vertical transmission and one case of hepatitis C vertical transmission. There were no other direct STI complications.

It was concluded that, although there was no evidence of a higher prevalence of STI in these cases, screening for STI was still logical in HIV-infected pregnant women. Further studies to identify those at highest risk and hence requiring repeat STI screening are required.

HIV self-tests for men who have sex with men, accessed via a digital vending machine: a qualitative study of acceptability

Raffe S, Pollard A, Vera JH , Soni S, Peralta C, Rodriguez L, et al.
Int J STD & AIDS 2020;31:420-5.

The views of men who have sex with men (MSM) regarding the availability of HIV self-testing (HIVST) kits via a vending machine in a sauna (a licenced sex-on-premise venue) were investigated in this study via semi-structured qualitative interviews. Twenty-three MSM (age range: 21-58 years; average age 43 years) attending the sauna were recruited. Overall, the participants considered the HIVST vending machine to be advantageous with ease of access, avoidance of the embarassement and inconvenience of attending an STI clinic listed among its benefits. The sauna was felt to be an appropriate location for HIVST. However, disadvantages of the HIVST included reduced screening for other STIs due to decreased STI clinic attendance. Poor access to treatment and counselling in case of a positive result (which could deter its usage) and inadequate understanding of the window period were the other drawbacks of this measure. The study also revealed the secondary distribution of testing kits to peers which could assist in identification of HIV cases who do not attend STI clinic, thus expanding the detection rate. Further study on this is required although the price of HIVST kits needs to be considered.

It was concluded that HIVST vending machines are an acceptable means of HIV screening although users need to be informed of its limitations and where to access traditional services in case of need.

Association of birth weight, childhood body mass index, and height with risk of hidradenitis suppurativa

Ravn Jørgensen AH, Aarestrup J, Baker JL, Thomsen SF.
JAMA Dermatol 2020;e201047. doi: 10.1001/jamadermatol.2020.1047. Online ahead of print.

The aim of this study was to investigate if there was a relation between childhood body mass index (BMI), birth weight, change in BMI during childhood, and childhood height and the risk of hidradenitis suppurativa (HS) in adulthood. These parameters were collected from 347200 Danish children aged 7 to 13 years old.

During the study period (1977 to 2017), 347200 children were recruited, of which 175750 were boys. A diagnosis of HS was made in 1037 individuals of which 677 were females (median age at diagnosis: 39 years; range: 15-73 years). The risk of HS was increased in the lightest (2.00-2.75 kg; HR, 1.36 [95% CI, 1.10-1.68]) and heaviest babies (4.26-5.50 kg; HR, 1.39 [95% CI, 1.01-1.93]) as compared to normal-weight babies (3.26-3.75 kg; P=0.04 for deviation from linearity). This formed a nonlinear (U-shaped) association of birth weight with hidradenitis suppurativa.

For each age between 7 and 13 years, there was a significant increase in the risk of HS with an increased BMI z score. Overweight children had an increased risk of HS: HR 2.11 (95% CI, 1.63-2.42) at 7 years of age; H R 2.38 (95% CI, 1.98-2.86) at 13 years of age when compared to children with normal weight.

Compared with children with a normal weight at 7 and 13 years of age, those with a normal weight at 7 years of age and overweight at 13 years of age had a significantly increased risk of HS (HR, 2.11 [95% CI, 1.63-2.74]) and children with persistent overweight at both ages also had an increased risk of HS (HR, 2.61 [95% CI, 2.02-3.38]). The risk of HS in adulthood was not significantly increased in children who were

overweight at 7 years of age but not at 13 years of age (HR, 1.05 [95% CI, 0.67-1.67]).

There was no significant association between height and with risk of HS for all age groups: children aged 7 years: HR 1.00 (95% CI 0.94-1.07); children aged 13 years: HR 1.06 (95% CI 0.99-1.13).

It was concluded that early body weight monitoring and introducing measures to normalise body mass index can reduce the risk of HS in adulthood.

Topical calcineurin inhibitors for pediatric periorificial dermatitis

Ollech A, Yousif R, Lacey Kruse L, Wagner A, Kenner-Bell B, Chamlin S, et al.
J Am Acad Dermatol 2020;82:1409-14.

A retrospective study of paediatric patients with Periorifical dermatitis (POD) treated with TCIs at the Ann & Robert H. Lurie Children's Hospital of Chicago between January 1, 2008, and December 31, 2018 was performed. Patients aged up to 17 years with a diagnosis of POD who had been treated with tacrolimus ointment and/or pimecrolimus cream were included in this study. The primary outcome was the proportion of patients who achieved clearance of POD (complete response [CR]) and secondary outcomes were partial response (at least 1 grade of improvement of the POD but not cleared), recurrence rates after CR and no response.

One hundred and thirty-two were recruited (median age at diagnosis: 4.2 years, 55% were female). The most commonly involved regions were as follows: perioral area (87%), perinasal (52%), periocular (37%), nonfacial regions (18%). Sixty patients were treated with tacrolimus ointment in 60 patients and 12 patients were treated with pimecrolimus 1% cream. The complete response rates for the various treatments were as follows: TCI alone: 68.8%; TCI and metronidazole: 75%; TCI and systemic antibiotic: 77.8%; triple therapy: 66.7%. There was a deterioration of POD in four patients, of which two had been treated with TCI monotherapy and two were treated with TCI and metronidazole combination therapy. The median time to partial response or complete response of the rash was 14 days (IQR, 7-60) and the was a recurrence of POD in 18% of patients. There was no association between disease severity, duration of disease before treatment, and type of treatment given, disease outcome or recurrence. Adverse events of TCI included burning sensation and sun sensitivity and which were mild and rare.

It was concluded that TCIs are a promising treatment option for paediatric patients with mild to moderate POD as monotherapy or in combination with other treatments for moderate to severe cases.

Efficacy and safety of topical sofpironium bromide gel for the treatment of axillary hyperhidrosis: A phase II, randomized, controlled, double-blinded trial

Kirsch B, Smith S, Cohen J, DuBois J, Green L, Baumann L, et al.
J Am Acad Dermatol 2020;82:1321-7.

Primary hyperhidrosis is believed to be due to excessive cholinergic stimulation of eccrine sweat glands. As sofpironium bromide (an ester analogue of glycopyrrolate) inhibits muscarinic receptors, a randomised, vehicle-controlled, double-blinded phase II trial to test its efficacy and safety as a topical gel formulation in patients with primary axillary hyperhidrosis was performed.

Participants were randomly assigned to the following study groups: sofpironium bromide gel, 5%, 10%, or 15%, or vehicle (placebo) in a 1:1:1:1 ratio. Participants applied treatment once

daily to both axillae for 42 days. The change in the Hyperhidrosis Disease Severity Measure-Axillary (HDSM-Ax) score was the primary end point and the secondary end points included the changes from baseline in gravimetric sweat production (GSP), modified Dermatology Life Quality Index (DLQI) and Hyperhidrosis Disease Severity Score (HDSS).

The study recruited 227 participants (mean age 30 years). The mean changes from baseline at the end of treatment (EOT) in HDSM-Ax score in the 5%, 10%, and 15% sofpironium bromide groups were: -2.02 (0.14), -2.09 (0.14), and -2.10 (0.14) respectively and the change from baseline to EOT in the vehicle group was -1.30 (0.14). Approximately two weeks after cessation of treatment, HDSMAx scores for all active-treatment groups gradually shifted towards those of the vehicle group. Although there was a greater mean reduction from baseline to EOT in all dose groups of sofpironium bromide gel compared with vehicle, only the 15% sofpironium bromide group fulfilled the prespecified criterion for a meaningful positive result (1-sided P=0.0644).

There were 177 treatment-emergent adverse events (TEAEs) reported by 73 out of 225 cases. Of these, 104 (51 participants) were either suspected or confirmed to be related to the study treatment.

Most TEAEs were mild or moderate in intensity and were typical symptoms of anticholinergic drugs (blurred vision, dry mouth). Although treatment cessation led to resolution of TEAEs, twelve participants withdrew from the study.

It was concluded that 5%, 10%, and 15% topical sofpironium bromide gel reduced axillary hyperhidrosis severity and it has a tolerable safety profile, further studies can be performed.

Melanoma risk in patients treated with biologic therapy for common inflammatory diseases: A systematic review and meta-analysis

Esse S, Mason KJ, Green AC, Warren RB.
JAMA Dermatol 2020;e201300. doi: 10.1001/jamadermatol.2020.1300. Online ahead of print.

A meta-analysis and systematic review was performed to examine whether there is an increased risk of melanoma in cases of inflammatory bowel disease (IBD), rheumatoid arthritis (RA), or psoriasis treated with biologics as compared with conventional systemic therapy. Cohort studies, randomised clinical trials, and nested case-control studies comparing the risk of melanoma in psoriasis, RA and IBD patients treated with biologics and those treated with conventional systemic therapy were included. The pooled relative risk (pRR) of melanoma in biologic-treated patients with IBD, RA, and psoriasis was compared with biologic-naive patients treated with conventional systemic therapy.

Seven cohort studies with a total of 34029 biologic-treated patients and 135370 biologic-naive patients treated with conventional systemic therapy were selected. When compared with conventional systemic therapy, there was a positive association between biologic treatment and melanoma in patients with RA (pRR, 1.20; 95% CI, 0.83-1.74), IBD (pRR 1.20; 95% CI, 0.60-2.40), psoriasis (hazard ratio, 1.57; 95% CI, 0.61-4.09). However, the differences were not statistically significant.

The author suggested that an increase in melanoma risk with biologics cannot be excluded. Larger cohort studies that take into account key risk factors are required.

Efficacy and safety of topical delgocitinib in patients with chronic hand eczema: data from a randomized, double-blind, vehicle-controlled phase IIa study

Worm M, Bauer A, Elsner P, Mahler V, Molin S, Nielsen TSS.
Br J Dermatol 2020;182:1103-10.

Delgocitinib is a pan-Janus kinase (JAK) inhibitor specific for JAK1, JAK2, JAK3 and tyrosine kinase 2 and inhibits inflammation through blockade of cytokine-mediated signalling cascades and may be useful for treatment of chronic hand eczema. This was a prospective, randomised, double-blind, vehicle-controlled clinical phase IIa study for the efficacy of topical delgocitinib ointment in the treatment of chronic hand eczema with previous inadequate response to topical steroid. Ninety-one patients (aged 18-65 years old) with chronic hand eczema were randomised to topical delgocitinib ointment (60 patients) or vehicle ointment (31 patients) applied twice daily for 8 weeks.

Treatment success rate in delgocitinib group was higher than vehicle group. Forty six percent of the delgocitinib group patients had 'clear' or 'almost clear' skin with ≥2-point improvement from baseline in the Physician's Global Assessment (PGA) vs 15% in vehicle group at week 8. Delgocitinib group patients had a lower mean Hand Eczema Severity Index score (13) vs vehicle group (25.8) at week 8. Both treatments were well-tolerated with a low incidence of side-effects [(delgocitinib: three (5%); vehicle: eight (26%)]. It was concluded that delgocitinib ointment is an effective and safe treatment for chronic hand eczema.

Sustained efficacy of secukinumab in patients with moderate-to-severe palmoplantar psoriasis: 2.5-year results from GESTURE, a randomized, double-blind, placebo-controlled trial

Gottlieb AB, Kubanov A, Van Doorn M, Papp KA, You R, Regnault P, et al.
Br J Dermatol 2020;182:889-99.

Secukinumab is a human monoclonal antibody against interleukin (IL)-17A. This was a randomised, double-blind, placebo-controlled, phase IIIb study conducted over 140 weeks to investigate the long-term (2.5-year) safety and efficacy of 300 mg and 150mg subcutaneous secukinumab in patients with moderate to-severe palmoplantar psoriasis. The study recruited 205 patients (aged ≥18 years old). Efficacy was assessed by palmoplantar Investigator's Global Assessment (ppIGA) and palmoplantar Psoriasis Area and Severity Index (PASI).

The primary end point with ppIGA score of 0 (clear) or 1 (almost clear) response was reached at week 16 in both secukinumab groups. Efficacy (ppIGA 0 or 1) was maintained in 59% and 53% patients in both secukinumab 300 mg and 150 mg group respectively with clear or almost clear palms and soles, 2.5 years after treatment. Mean palmoplantar PASI percentage was reduced by 74.7% and 61.6% patients in secukinumab 300mg and 150 mg group respectively 2.5 years after treatment. In the secukinumab 300 mg and 150 mg groups, the DLQI scores decreased by 53.1% and 30.3% respectively; 17% and 18% patients in both secukinumab 300 mg and 150 mg group respectively had no significant functional problems in the hands and feet as assessed by the palmoplantar quality of life instrument scores. Common side effecs from both secukinumab groups were headache, upper respiratory tract infection, *Candida* infection, and nasopharyngitis. Overall, the safety profile was favourable. It was concluded that secukinumab is an effective treatment of palmoplantar psoriasis with a sustained response up to 2.5 years.