

## Poster presentations

**Methods** A case-control study, based on data from medical records of women who had attended the clinic between January 2003 and April 2008. Demographic, behavioural and clinical characteristics of symptomatic women diagnosed with BV using the Nugent gramme stain scoring system, were compared to those of symptomatic women who were tested negative for BV.

**Results** A total of 341 symptomatic women were included in this study; 131 were diagnosed with BV (cases) and 210 were symptomatic but were not diagnosed with BV (control group). In a multivariate analysis BV diagnosis in symptomatic women was related to being born in the former Soviet Union, multiple sexual partners (> 6) in the previous 3 months, and previously infected with HSV or *Chlamydia trachomatis*. Candida was found to be inversely related to BV diagnosis.

**Conclusion** BV diagnosis poses a diagnostic challenge for the physician, as the symptoms are not specific even among symptomatic women. Furthermore, candida infection may be characterised with similar clinical symptoms and may delay BV diagnosis. Being familiar with the risk factors for BV may assist the physician in diagnosing the disease in its earlier stage, thus preventing further morbidity. The demographic, behavioural and clinical factors attributed in this study are easily retrieved by anamnesis and can raise the level of suspicion to the possibility of BV.

**P2.111 STREPTOCOCCAL BALANOPOSTHITIS AS UNRECOGNIZED SEXUALLY TRANSMITTED INFECTION**

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**Purpose** We investigated balanoposthitis caused by *Streptococcus pyogenes* following sexual intercourse to reveal an efficient diagnosis and treatment.

**Materials and Methods:** Five male patients complaining of genital inflammation after sexual intercourse were diagnosed as balanoposthitis arising from *Streptococcus pyogenes* infection between 2008 and 2012. The clinical characteristics were retrospectively reviewed.

**Results** Three cases presented with marked pyoedema of the glans and foreskin mimicking gonococcal or chlamydial urethritis. The remaining two cases presented with papules, scabs and erosions without discharge, which were similar to candidiasis or genital herpes. All cases were diagnosed as balanoposthitis arising from *Streptococcus pyogenes* infection, which was confirmed by cultures of genital area. Two of them underwent biochemical testing of rapid antigen detection (StatCheck Strep A II™, Kainos Ltd., Japan) with bacterial culture examination, and identified as streptococcal balanoposthitis at the initial visit. Three cases were successfully treated with penicillin. Antibiotic susceptibility revealed that all cases were fluoroquinolone intermediate resistant patterns

**Conclusion** Streptococcal balanoposthitis has rarely been reported, and has not been recognised as a sexually transmitted infection. Because of common appearances and symptoms, it may have a higher prevalence than previously considered. These cases could be divided into two categories in terms of clinical characteristics, "discharge dominant type" and "eruption dominant type". Rapid antigen detection of *Streptococcus pyogenes* should be attempted to use as first diagnostic tool for male genital inflammation for proper antibacterial therapy.

**P2.112 THE ENYGMATA OF BUSCHKE-LÖWENSTEIN IN THE HPV VACCINE ERA**

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**Background and open questions** Buschke-Löwenstein tumour (BLT) or giant condyloma acuminatum is a semimalignant neoplasm of the external genitalia and the perianal region. The hallmark of BLT is its possible transformation into squamous cell carcinoma (SCC) despite its histological benignity, and high rate of local recurrence. Most authors believe that BLT is a type of verrucous carcinoma (VC). Other authors suggested that BLT and VC are two distinct entities, in spite of all morphologic similarities, and the basic difference they investigate is correlation of BLT and HPV infection and p53 inactivation. It has been proposed that BLT represents intermediate state between CA and SCC. Malignant transformation to invasive SCC has been reported in 30–56% of cases. The variety of impressive clinical features in our patients with BLT, including the subjects in the age of 1.5 years support these findings. HPV DNA type 6 or 11 is regularly found in most (but not all) types of BLT, strongly suggesting its aetiological role in tumour development. In all of our BLT patients HPV DNA 6 has been revealed, except in 1 patient with HPV DNA 18. Accordingly, in this patient the histopathological evidence of malignancy (SCC) was documented! Due to lack of controlled studies about BLT, uniform treatment guidelines have not yet been established.

**Conclusion** An analysis of most published cases, including our own experience brought up conclusion that only consistently effective therapy is wide surgical excision of the tumour with clear margins, in spite of some anecdotal reports of the successful treatment with interferon or imiquimod. The recent introduction of a HPV vaccine (especially the quadrivalent one considering the prevention of the anogenital warts in men) has ushered in new hope of substantially reducing global prevalence of HPV disease and the burden of BLT.

**P2.113 URINARY CALPROTECTIN: A BIOMARKER OF URETHRAL INFLAMMATION**

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**Background** There is currently no reliable indicator of inflammation available for the evaluation of genital tract syndromes. We investigated the association of urinary calprotectin concentration, an innate immune system mediator protein, with urethritis.

**Methods** First catch urine specimens from men with and without urethritis (> 10 neutrophils/high power field of urethral smears) were tested for *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT), *Mycoplasma genitalium* (MG) and *Trichomonas vaginalis* (TV) by nucleic acid amplification tests (NAAT). Supernatants from these samples were tested in duplicate by ELISA for human calprotectin. Data were analysed using Spearman's coefficient of rank correlation (rho) and ROC curves.

**Results** 159 urinary supernatants were tested. 54/159 had urethritis; 35/159 were NAAT positive for any of CT, NG, MG or TV of whom 27/35 had urethritis; 97/159 had no urethritis and were NAAT negative for all 4 pathogens. The correlation coefficient (rho) for calprotectin concentration and presence of urethritis/infection was 0.529 (95% CI: 0.407–0.633; p < 0.0001) with a calprotectin concentration of 95ng/mL (95% CI: 65–119.64ng/mL ROC curve AUC: 0.811, 95% CI: 0.741–0.869 p < 0.001) having a sensitivity of 0.771 (95% CI: 0.594–0.949) and specificity of 0.831 (95% CI: 0.746–0.915) compared to a sensitivity and specificity of urethral smears of 0.771 (95% CI: 0.594–0.949) and 0.782 (95% CI: 0.69–0.875) respectively in detecting CT, NG, MG or TV infections. The calprotectin assay had sensitivity and specificity of 0.629 (95% CI: 0.476–0.782) and 0.907 (95% CI: 0.834–0.981) respectively for detecting urethritis.

**Conclusion** Urinary calprotectin had similar sensitivity and specificity for common urethral pathogens as urethral microscopy. Low calprotectin concentration correlated well with the absence of inflammation. Use of the assay is currently limited by the unknown dilution effect of urine in estimating urethral calprotectin concentrations but calprotectin is a promising biomarker of inflammation in investigating reproductive tract infections (RTI) of different aetiologies particularly where microscopy may not be available, such as in community settings.

**P2.114 COINFECTION OF TREPONEMA PALLIDUM AND CYTOMEGALOVIRUS (CMV): A COMPLICATED CASE OF A NEWBORN IN HUNGARY**

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**Background** Although congenital syphilis and congenital CMV infections are preventable they are still the major causes of perinatal mortality and morbidity. Expectant mothers from lower socioeconomical status and intravenous drug users belong to the highest risk groups for vertical transmission of infections. Here we present a coexistence of congenital syphilis and CMV infection complicated with multiplex jejunal atresia.

**Methods** Clinical analysis, laboratory, serological and PCR examinations.

**Case presentation** 990 grams, 38 cm height (pc.75–91) girl was born to an intravenous drug user mother on the 26th gestational week. The expectant mother did not participated in the prenatal care and early latent syphilis (RPR 1:128 positive, TPPA and TpELISA positive), genital *Streptococcus agalactiae* and fungal infection were detected shortly before delivery.

The preterm and immature girl had jaundice, oedema, gluteal haematoma and petechiae. Extremely enlarged liver and spleen (reaching the hip bone) and increased muscle tone with rigid joints were found. Multiple jejunal atresia was detected by bedside X-ray examination.

Anisocytosis, thrombocytopenia, elevated liver enzymes (ASAT: 3850, ALAT: 558, GGT: 292, ALP: 436) and elevated LDH (38180) and CK (7.1) with direct hyperbilirubinaemia were found.

During microbiological examinations high copy of CMV virus number was detected by quantitative real-time PCR and syphilis serology was positive (RPR: 1:16 positive, TPPA, Tp ELISA, *T. pallidum* IgM immunoblot positive).

Intravenous penicilline-G (100.000 IU/kg/dose for 10 days) and intravenous ganciclovir was administered. Ganciclovir was stopped after 4 weeks because of progressing thrombocytopenia. The multiplex jejunal atresia was fixed by operation resulting in satisfactory intestinal passage.

**Conclusions** Although syphilis screening test within the prenatal care is mandatory in Hungary, congenital syphilis cases do occur. Immature immune system is predisposing factor for coinfections of a newborn. The symptoms of *T. pallidum* and CMV infection is very similar, presenting a diagnostic challenge.

**P2.115 GENITAL ULCERATION: INFECTION OR AUTOINFLAMMATORY DISEASE?**

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Ulcers in the genital area are usually caused by sexually transmitted infections (STIs). These include herpes, syphilis, and chancroid. However, they might also be caused by inflammatory diseases,

trauma, autoimmune bullous disorders or cutaneous malignancies. In young women, Lipschütz Ulcer, or *ulcus vulvae acutum*, is a rare and probably underdiagnosed entity with unknown aetiology, although recent reports have associated it with the Epstein-Barr virus.

Diagnosis of most of these conditions is established by exclusion after ruling out sexually transmitted diseases, and finally with the help of histopathology. An exception is Behçet's disease (BD), a multisystem chronic inflammatory disorder, diagnosed based on the established diagnostic criteria and/or PFAPA, PAPA and TRAPS syndromes which are diagnosed by exclusion and genetic means. A complex genetic background leading to activation of the innate immune system and particularly inflammasomes through auto- or environmental antigens is presumably the causative.

Accordingly, apart from corticosteroids and colchicine, anti-TNF- $\alpha$  therapy may be useful in conventional therapy-resistant refractory and severe BD as well in patients with PFAPA syndrome. With this abstract we would like to present and discuss our experience on diagnosis as well as treatment of "Difficult to Diagnosis and Treat" patients with genital ulcers from the DIAID of the Department of Dermatology at the Medical University of Vienna.

Beside STIs as the cause genital ulcers, autoinflammatory disorders should be also considered. Here, novel approaches such as anti-TNF-a and IL-1R blockers are promising therapeutic strategies and warrant multicenter clinical studies.

**P2.116 GENITAL ULCER, NOT ALWAYS A CLASSIC SEXUALLY TRANSMITTED DISEASE: CASE REPORT OF VULVAR TUBERCULOSIS**

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**Background** Tuberculosis is a very common disease worldwide. In 2010 there were 71000 cases reported in Brazil. The genital presentation has a prevalence of 8–10 million cases worldwide. The vulvar/vaginal involvement is less than 2% of the cases. The clinical presentation can be variable and genital ulcers (GU) can be confused with sexually transmitted diseases (STD) such as syphilis and chancroid.

**Methods/results(case report)** MJS, 73y, G9P9, rural worker, attended at a clinic specialised in genital infections at the State University of Campinas (UNICAMP)-Brazil with dysuria and pain/burning in the vulva for 3 months. Physical examination revealed ulceration of 3cm in small genital right lip with bilateral inguinal painless adenopathy. The ulcer biopsy showed chronic granulomatous inflammation and search for AFB and fungi by techniques of Gomori and Ziehl-Nielsen were negative. Vaginal bacterioscopy and serologies were regular. Vaginal wall biopsy with search and culture resulted positive for complex *M.tuberculosis*. The Mantoux test resulted in strong reaction-13mm and the AFB sputum (3samples) was negative. Chest radiography showed no abnormalities. It was introduced the treatment with isoniazid+rifampicin for 6 months. After 60 days the patient presented ulcer resolution.

**Conclusion** The authors describe an unusual presentation of the disease, a painless chronic ulcer, for which differential diagnosis of GU by STD should be clarified. The isolation of *M.tuberculosis* in the culture of the ulcer is the gold standard for the diagnosis of genital tuberculosis. The ulcers caused by herpes virus, syphilis or chancroid are common, but it is essential to think of an infection by *M.tuberculosis*, especially in countries where the prevalence of the disease is high. It was suggested that the sputum of a subject with pulmonary tuberculosis when used as a lubricant during intercourse can transmit genital disease, making it an eventual STD. Chronic GU should be biopsied and the possibility of unusual etiologies should be considered.



## P2.113 Urinary Calprotectin: A Biomarker of Urethral Inflammation

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