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 ENYGMA 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 immiquimod. 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.