

A “Smorgasbord” of Venereology

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Matilda Berntsson defended her PhD thesis “Sexually Transmitted Infections – serological, microbiological and microscopical aspects” at the Sahlgrenska Academy, Göteborg, Sweden on April 7th 2011. The thesis was supervised by Gun-Britt Löwhagen and Petra Tunbäck. The Opponent was Peter Lidbrink, Department of Dermatology, Karolinska Institutet, Huddinge, Sweden.

The thesis comprised five papers and was described by the opponent, Peter Lidbrink, Senior Dermato-venereologist and Associate Professor at the Karolinska Institute, as a “smorgasbord” in the field of sexually transmitted infections. The three main topics discussed were: (i) the prevalence of the herpes viruses, herpes simplex type 1 (HSV-1) and type 2 (HSV-2), Epstein-Barr virus (EBV) and cytomegalovirus (CMV) in different populations; (ii) the clinical spectrum of genital infection with HSV-2; and (iii) the connection between different criteria of cervicitis and female urethritis and a positive test for *Chlamydia trachomatis*.

HSV-2 infections, diagnosed by type-specific serology, were common, both in patients with sexually transmitted infections (STI) and in pregnant women. Of the pregnant women 10% were seropositive for HSV-2, and of female and male STI patients 23% and 12% had HSV-2 antibodies, respectively. Infection with HSV-2 was often asymptomatic. Only 41% of seropositive patients had a history of genital herpes. Atypical manifestations, so-called unrecognized infections, were common and are of clinical importance.

Among 112 male patients with urethritis, no cases of HSV were found. Instead, EBV was detected by polymerase chain reaction (PCR) in urethral samples in a significantly higher proportion of the subjects than in the controls (21% vs 6%). EBV was also detected in 10.5% of cervical samples from young women attending for cervical cancer screening. In a similar proportion of these women (11.5%) CMV was found in the cervical specimens.

In female STI patients a significant correlation with a positive *C. trachomatis* test was shown for mucopurulent discharge in the cervical portio, for easily induced bleeding from the same locus, and for more polymorph nuclear leucocytes (PMNL) than epithelial cells in the vaginal wet smear. However, no correlation was demonstrated between microscopic cervicitis or urethritis and *C. trachomatis*.



Fig. 1. Matilda Berntsson defended her thesis in Göteborg in April 2011. From left: Petra Tunbäck, Gun-Britt Löwhagen (Supervisors), Matilda Berntsson and Peter Lidbrink (Opponent).

In conclusion, diagnostic tests for HSV-2 should be performed routinely in patients with recurring genital symptoms of unknown cause. The detection of EBV in urethral samples from men with urethritis and the demonstration of EBV and CMV in the cervix of young women support genital transmission of these viruses. EBV was significantly correlated with male urethritis, which has not been demonstrated previously. However, further studies are needed to elucidate a possible causality between EBV and urethritis. Since an elevated number of PMNL in stained smears from the cervix or the urethra was not correlated with a positive test for *C. trachomatis*, the value of routine sampling for microscopy from these loci in unselected female STI patients is questionable.

Reference

1. Berntsson M. Sexually transmitted infections – serological, microbiological and microscopical aspects. Gothenburg: Sahlgrenska University Hospital, University of Gothenburg; 2011. ISBN: 978-91-628-8245-7. Available from: <http://hdl.handle.net/2077/24094>.