Short Communication

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High prevalence and risk factors associated with Mycoplasma hominis in South African pregnant women

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Background & Aim:

The World Health Organisation has provided annual estimates of more than 448 million new cases of sexually transmitted diseases worldwide, and this greatly contributes towards the health burden. Among these estimates are those of emerging, opportunistic sexually transmitted pathogens, such as genital mycoplasma species that have been reported. Genital mycoplasmas have been implicated in various adverse reproductive health and pregnancy outcomes that include, pelvic inflammatory disease, endometritis, chorioamnionitis, infertility, spontaneous abortion, stillbirth and preterm birth. Despite these devastating health concerns, there is limited data available on the prevalence of these pathogens in pregnancy. This study therefore aimed to provide prevalence estimates of Mycoplasma hominis (M. hominis) and Mycoplasma genitalium (M. genitalium) in pregnant women attending routine antenatal care, in a Durban hospital, and then to identify associated risk factors for infection. Detection of mycoplasmas was determined using real-time quantitative polymerase chain reaction (RTqPCR). Of the 221 study participants screened, the prevalence of M. hominis and M. genitalium were 47.96 and 5.88, respectively. Approximately, 4.98% of the women were found to be co-infected with both pathogens. Past and current reported episodes of abnormal vaginal discharge, having >4 lifetime number of sexual partners and having obtained lower level education were found to be significantly associated with M. hominis infection. Smoking was identified as a significant risk factor for M.genitalium infection. The high prevalence of M. hominis infection reported in our pregnant study population from Durban, strongly suggests the importance of routine gynaecological testing for sexually transmitted infections, so that treatment can be implemented at early diagnosis and associated adverse pregnancy outcomes can be prevented.

Biography:

Dr Naicker is a postdoctoral research fellow at the School of Clinical Medicine Laboratory, Nelson R Mandela School of Medicine, University of KwaZulu-Natal (UKZN), Durban, South Africa. In addition, Dr Naicker is a co-supervisor and mentor to postgraduate research students and a tutor to undergraduate medical students at the same institute.

Earlier, Dr Naicker had completed her undergraduate degree (BSc in BioMedical Sciences) at Howard College, UKZN. She then went on to obtain postgraduate degrees: BMed Honours in Medical Sciences, cum laude (Medical Microbiology), Masters in Medical Sciences (Medical Microbiology) and Ph.D. in Health Sciences (Pharmaceutical Sciences) from the Nelson R Mandela School of Medicine, UKZN. Her Honours project investigated mucin-degrading proteins that are critical in the pathogenicity of the parasitic protozoan, Trichomonas vaginalis, known for colonising the epithelial cells of the urogenital tract. Her Masters project aimed to improve the point-of-care diagnostic testing for Treponema pallidum subsp pallidum, the syphilis causing-agent, by developing a test that detects whole organism rather than antibodies, directly from ulcer secretions. Dr Naicker's PhD project in pharmaceutical research investigated an alternate association between auto-immune thyroid disease and the pathophysiology of bipolar disorder by identifying the extra-thyroidal location of thyroid- specific proteins, specifically in mood control areas (limbic system) of human brain, as potential therapeutic targets for bipolar disorder. These findings were recently published in the Journal of Metabolic Brain Disease and presented at local conference proceedings. Dr Naicker was awarded scholarship funding from the National Research Foundation and Medical Research Council of South Africa towards the completion of her postgraduate studies

Publication of Speakers:

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3. Cassell, G.H., Waites, K.B., Watson, H.L., Crouse, D.T., and Harasawa, R. Ureaplasma urealyticum intrauterine infection: role in prematurity and disease in newborns. Clin Microbiol Rev. 1993; 6: 69–87.

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