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Screening of maternal toxoplasmosis in pregnancy: Laboratory diagnostics in the view of public health requirements

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Serological screening for maternal *Toxoplasma* infections in pregnancy has been questioned recently. We analyze some diagnostic difficulties for routine laboratories, poor public health guidance of existing screening programs and their mutual worsening impact on the efficacy of the programs and on toxoplasmosis research. False positive screening tests may be more likely than true maternal *Toxoplasma* infections and diagnosis often depends on confirmatory testing in experienced reference laboratories. Apart from clear seroconversions, any marker to assign the time point of infection to the ongoing pregnancy (IgM, avidity, etc.) suffers from important limitations. With poor screening compliance, many screening alerts come from first serum samples in pregnancy that are cumbersome to test while seroconversions are seldom observed due to missing follow-up samples in late pregnancy. From a public health perspective, inadequate epidemiological assessment and research, insufficient quality control for compliance and little consideration of diagnostic peculiarities for the design of more effective preventive programs has resulted in poor performance. These shortcomings have contributed to the present doubts about preventive *Toxoplasma* screening in pregnancy. We recommend that a team of public health decision makers, epidemiologists and experts from toxoplasmosis reference laboratories reevaluates the existing activities in a given country to build up a well-designed preventive program that avoids these drawbacks.

Biography

Ulrich Sagel has completed his specialty in Medical Microbiology in 1999. He has obtained his MSc in Epidemiology in 2005 and his DrPH in 2014 from School of Public Health of University of Bielefeld. Presently he is the Deputy Head of the Department of Hygiene and Microbiology of Karl Landsteiner University of Health Sciences.

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