Coxiella burnetii and members of the genus Rickettsia are obligate intracellular bacteria. Since cultivation of these organisms requires dedicated techniques not routinely performed in clinical microbiology laboratories, their diagnosis usually relies on serological or molecular biology methods. Immunofluorescence is considered the gold standard to detect antibody-reactivity towards these organisms. Here, we assessed the performance of a new automated epifluorescence immunoassay (InoDiag) to detect IgM and IgG against C. burnetii, Rickettsia typhi and Rickettsia conorii.

**BACKGROUND**

**MATERIALS AND METHODS**

Sera from acute, chronic or past Q fever infections as well as rickettsiosis cases were selected from our routine serological laboratories (seroconversion, clinically confirmed or compatible cases).

**RESULTS**

**CONCLUSIONS**

- For acute Q fever, sensitivity of Inodiag IgG detection is very low (15.3%); although, the sensitivity for IgM is much better (75%), the Inodiag test missed three early seroconversion that were detected using immunofluorescence. Among patients with chronic Q fever, the specificity was excellent (100%).
- The C. burnetii Inodiag assay exhibits an excellent specificity since no serology was positive among pregnant women. The 16% prevalence of Coxiella antibodies among patients with rickettsial diseases may reflect exposition to Coxiella in this patient population.
- Overall, the prevalence of antibody reactivity against the different rickettsial species tested ranged from 22% to 78% and 90% for R. africae, R. conorii and R. typhi, respectively, suggesting a reasonable sensitivity of the Inodiag assay for R. conorii and R. typhi.
- For Rickettsia the Inodiag assay exhibits an excellent specificity of 97% since only 3 sera were positive among pregnant women.
- Testing antibody reactivity of these sera against Rickettsia spp. by immunofluorescence will help precise the sensitivity and specificity of the Inodiag test.