EVALUATION OF LDBIO® IMMUNOCHROMATOGRAPHIC TEST TO CONFIRM ANTI-TOXOPLASMA GONDII IGM IN SYSTEMATIC SCREENING OF TOXOPLASMOSIS ON ATELLICA IM - SIEMENS®

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1 BACKGROUND

- French guidelines recommend a systematic toxoplamosis screening during pregnancy and a monthly serological monitoring for negative tested women [1].
- IgM anti-toxoplasma without IgG (IgG-IgM+ profile) is an evocative element of a recent infection [2] and must be controlled by another method to verify the specificity of the IgM detected, and a second sampling two weeks later to assess antibody kinetic [3].
- In this context, the immunochromatographic test (ICT) TOXOPLASMA ICT IgG-IgM LDBIO® appears to be a quick, simple and efficient solution to confirm or not the specificty of anti-toxoplasmic IgM in a pregnant woman with an IgG-IgM+ profile for toxoplasmosis [4].

2 METHODS

- Evaluation was carried out on the centralized Laborizon Bretagne Biogroup technical platform in Nantes (44).
- Toxoplasmosis screening technique is Atellica IM Siemens®.
- Selected profiles were the IgG-IgM+ profiles not previously tested by ICT. A serological control at 15 days was proposed to the patient in order to evaluate the IgG seroconversion.
- Seras were sent to another laboratory for confirmation of the presence of IgM by another technique (Platelia Bio-Rad®, Alinity I Abbott® and/or Vidas Biomérieux®) as well as IgG seroconversion if applicable.

3 RESULTS

- Among the 39,576 toxoplasmosis serologies performed throughout Laborizon Bretagne during the study, 94 IgG-IgM+ profiles were identified (0,24%).
- 52 patients were included : 1 man and 51 women, with 46 pregnant, 2 non-pregnant and 3 with no pregnancy status information.
- In 48 cases (92.3%), the IgM positivity was not confirmed neither by ICT LDBIO®, nor by other techniques (at least one) nor by the kinetics of the antibodies which did not reveal any seroconversion.
- In three cases (5.8%), the presence of IgM was confirmed by ICT LDBIO® as well as at least one confirmation technique. In these three cases, after 15 days the kinetics of the antibodies revealed a proven toxoplasmic seroconversion.
- One case (1.9%) had positive IgM on Atellica, confirmed by other techniques (even IgM western blot) but not by the ICT LDBIO®.
- The results are summarized in Figure 1.

Figure 1 : Performances of the ICT LDBIO® for seras with Atellica IM Siemens® IgM+IgG- profile

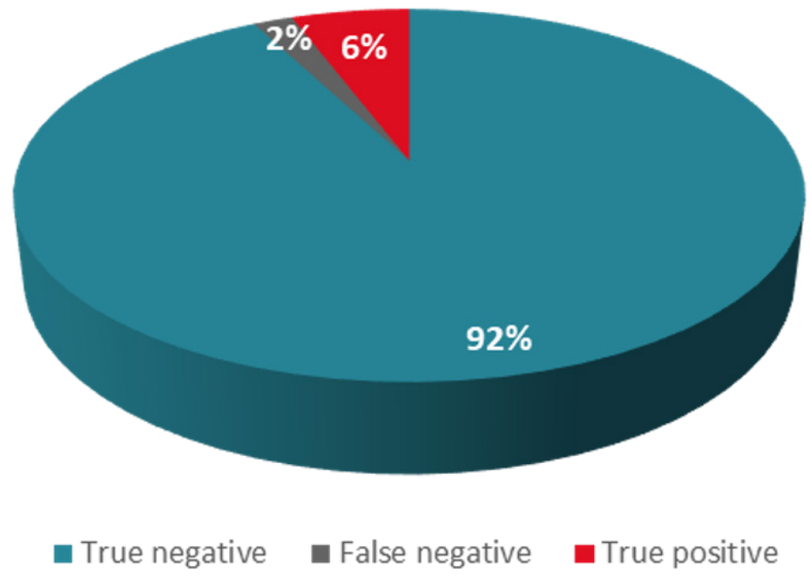
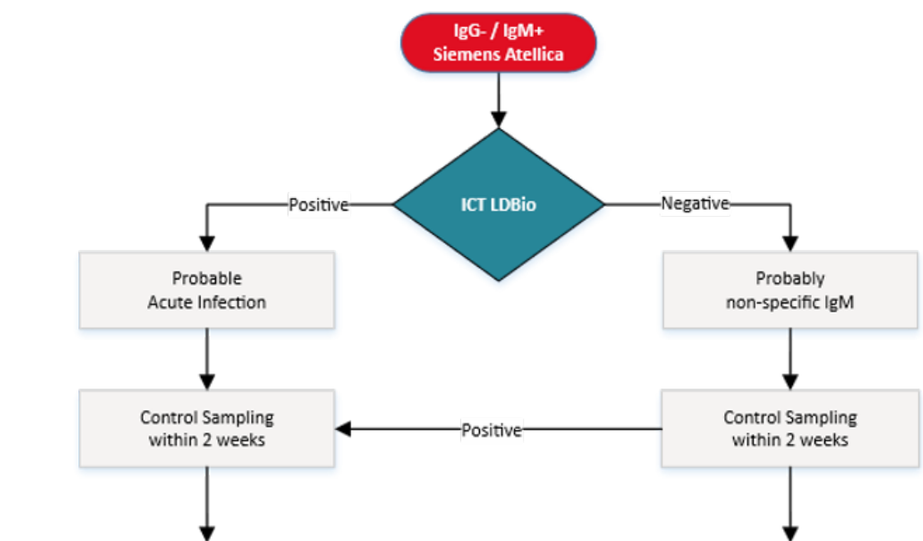


Figure 2 : Atellica IM Siemens® - ICT TOXOPLASMA IgG-IgM LDBIO® toxoplasmosis diagnostic algorithm according to French Guidelines



4 CONCLUSION

- ICT TOXOPLASMA IgG-IgM LDBIO® in this context improve the overall screening performance and provides excellent discrimination of IgG- / IgM+ serological profiles obtained on Atellica Siemens®.

→ ICT LDBIO® allowed in 98.1% of cases a good orientation patients towards a probable non-specificity of IgM or a probable future seroconversion.

→ ICT LDBIO® is wrong for 1 patient, but these result would have been compensated by the control at 15 day. No therapy or additional examination is indicated until IgG seroconversion is proven (3).

- This test simplifies the analytical process, improves the turnaround time to results, with an excellent level of quality, while respecting the French recommendations [3] (Figure 2).

References

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