Toxoplasma testing in pregnancy

Toxoplasma infection acquired in pregnancy can have serious even fatal consequences. Infection is often asymptomatic or if symptoms are present they can be mild /moderate/non-specific and may pass unnoticed. Serological testing to assess the risk of toxoplasma infection to a pregnancy relies on:

- Determining toxoplasma immune status
- Identifying current/ recent infection.
- Determining when infection occurred in relation to conception.

Immunity testing must not give false reassurance of immunity and must not miss current infection. Laboratories use a wide variety of toxoplasma tests and the sensitivity and specificity of tests must be considered. In pregnant women a higher threshold equivalent to approximately 15iu in the dye test would be recommended to avoid false reassurance of immunity. It is advisable to demonstrate the absence of specific IgM to exclude current toxoplasma infection.

Detection of specific toxoplasma IgM antibody can indicate current infection but test results must be interpreted with great caution .There are a wide variety of IgM assays available and their different sensitivities can cause problems for patient management. Some assays can remain positive for >1 year after infection, others for 6 months. In addition there is considerable variation in the length of time specific IgM is produced by different patients. Toxoplasma IgM tests may therefore be **positive** in women infected prior to conception and whose pregnancy is not at risk from toxoplasma .It should be emphasised that the IgM immunosorbent agglutination assay( IgM ISAGA) is too sensitive and is usually **not** helpful in testing in pregnancy.

Determining if toxoplasma infection was acquired during pregnancy is very important for patient management .In the absence of antenatal screening this may have to be assessed on a single specimen. The IgG avidity test can distinguish between infection acquired recently and infection acquired several months previously. This can establish that infection was acquired before conception and there should be no risk to the foetus unless there is immunocompromise.
Toxoplasma testing in pregnancy presents a challenge for the laboratory. A battery of tests may be required to make a diagnosis. One should seek advice in difficult cases. If toxoplasma infection in pregnancy is suspected the recommendation would be to refer samples to a Specialist Reference Laboratory.

Reference

Investigation of Toxoplasma Infection in Pregnancy, Standards Unit, Evaluations and Standards Laboratory QSOP59i1, www.evaluation-standards.org.uk