

New variant of *Chlamydia trachomatis* reported in Sweden: Implications for Diagnostic Laboratories across Europe

The *Chlamydia trachomatis* cryptic plasmid is high copy number and as such, is a popular target for commercial diagnostic platforms. However a new variant *C. trachomatis* strain has been isolated in Sweden^{1,2} which has a 377bp deletion in a portion of the plasmid that is the target area for the *C. trachomatis* NAATs manufactured by Abbott and Roche. Consequently these platforms generate false negative results when screening specimens from patients who are infected with the new variant strain. Platforms which remain unaffected by this deletion are the Aptima Combo 2 (AC2: Genprobe), RealArt CT Kit (Artus), and the Strand Displacement Assay (Probetec, Becton Dickinson), as they target rRNA, the *omp* gene and a different region of the cryptic plasmid, respectively.

The duration of time that this new variant has been circulating undiagnosed in the Swedish community is, as yet undetermined, however recent decreases in *C. trachomatis* infections have been observed and consequently concerns are that the strain is widely distributed throughout the country. There is currently no evidence that the new *C. trachomatis* variant is present elsewhere in Europe.

Current Recommendations to ESSTI collaborating laboratories:

- Laboratories performing testing on two platforms, including either the Roche or Abbott tests, should consider using the Roche or Abbott tests for confirmation rather than primary testing.
- Laboratories who are using Roche or Abbott platforms as their only method of *C. trachomatis* detection should carry on using this approach but be vigilant for obvious decreases in the number of positive cases
- All laboratories should look for new alerts containing updated information.

ESSTI (essti@hpa.org.uk) are happy to assist with any local problems or discuss potential discrepant results that may be due to the variant strain.

Future studies:

The ESSTI microbiology collaborative group, in partnership with the Sexually Transmitted Bacteria Reference Laboratory, at the Health Protection Agency (STBRL, HPA) are currently investigating this new variant strain. The strategies outlined below will be employed to determine whether the new variant is present within Europe and if it is, ascertain its prevalence. All findings will be made available as soon as possible.

- Investigation of the presence of this variant in samples from different geographical locations across Europe.
- Perform trend analyses to identify unexpected decreases in the number of positive cases of *C. trachomatis*.

- 1 Ripa, T. & Nilsson, P. (2006). A variant of *Chlamydia trachomatis* with deletion in cryptic plasmid: implications for use of PCR diagnostic tests. *Eurosurveillance*, 11 (11), Available at: <http://www.eurosurveillance.org/ew/2006/061109.asp#2>.
- 2 Soderblom T, Blaxhult, Fredlund H, Hermann B (2006) Impact of a genetic variant of *Chlamydia trachomatis* on national detection rates in Sweden. *Eurosurveillance* 11 (12) Available at: <http://www.eurosurveillance.org/ew/2006/061207.asp#>

Collaborative Group Meeting

The first ESSTI collaborative group meeting of the new phase of the network was held at the end of November in London. Since the last collaborative group meeting in 2004, the network has experienced considerable personnel changes and has gained 10 new participating countries. This meeting was therefore an opportunity for the project team to meet members of the collaborative group for the first time and to welcome new colleagues to the ESSTI network. It was also a chance to welcome Ulrich Laukamm-Josten from WHO-Euro and Marita van de Laar, previously a member of the ESSTI steering group, in her new role as ECDC representative.

Feedback on this meeting has been very positive and we would like to thank all those collaborators who were able to attend and Dr Kate Soldan, a guest lecturer, who gave a fascinating lecture on HPV vaccination programmes.

The full meeting report will be available shortly on the ESSTI website www.essti.org.



ESSTI Collaborative Group at HPA Centre for Infections, November 2006

Upcoming Events and Activities

Laboratory Training Course

A one-week course on bacterial sexually transmitted infections diagnostics will be held on 16-20th April 2007 at HPA Centre for Infections, London. Lectures and practical training sessions will guide participants through a range of laboratory techniques, but particular emphasis will be placed on laboratory diagnosis and antimicrobial susceptibility testing for *Neisseria gonorrhoeae*. This course is open to ten microbiologists who work in ESSTI collaborating laboratories. All course fees and expenses, including travel and accommodation will be covered by ESSTI. Anyone who would like more information on this course should contact ESSTI at essti@hpa.org.uk. A second course will be run in late 2007 or 2008 for those who are unable to attend the course in April.

Microbiology Questionnaires

Questionnaires on STI laboratory methods and procedures for *N. gonorrhoeae* reference laboratories have been sent out to microbiologists from the newly participating countries of the network. This questionnaire will allow us to identify the range of laboratory methods and procedures used throughout the ESSTI network. It is therefore vital in allowing the ESSTI project to move forward. Thank-you to those countries who have already completed and returned this questionnaire. Please can we ask those countries who have not yet submitted the questionnaire to do so as soon as possible.

Contact details of the ESSTI Team at HPA

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ESSTI Newsletter

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