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Evaluation of Starplex Multitrans and Micro Test M4-3 Viral Transport Devices for Abbott Ligase Chain Reaction (LCR) Assays for *Neisseria gonorrhoeae* and *Chlamydia trachomatis*. K. J. DeAngelo*, B.A. Body, D. L. Vestal, Laboratory Corporation of America, Burlington, NC.

Background

The increase in proprietary specimen collection devices often leads to incorrect specimen collection. A multipurpose transport that can be used for culture, enzyme immunoassay and nucleic acid amplification is an attractive alternative. Our lab evaluated "universal" transport media for use with Abbott (UriprobeTM) LCR assays for *Neisseria gonorrhoeae* (NG) and *Chlamydia trachomatis* (CT) and compared a dilution and centrifugation preparation protocol.

Methods

Preliminary work compared performance of LCR assays with culture results and demonstrated 100% sensitivity and > 99.5% specificity for either transport. We next compared the use of Multitrans (Starplex Scientific, Etobicoke, Ontario, Canada) and Multi-Microbe Media (M4-3) (Micro Test, Lilburn, GA) in dilution and centrifugation protocols. Transport media were prepared by diluting sample 1/10 in each vendor's transport media or by centrifugation at >9,000 x g for 15 min. We compared the dilution and centrifugation protocols for Multitrans and M4-3 to the Abbott transport using seeded specimens containing between 10 and 1 colony forming units/inclusion forming units, after storage for 0, 24 and 72 hrs (180 determinations). We also tested 16 clinical specimens in triplicate using both protocols (96 determinations).

Results

Seeded specimens showed 100% agreement for both dilution and centrifugation protocols with the results obtained from the Abbott transport (140/140 positive; and 45/45 negative). There was 100% agreement for positive clinical specimens, but 1/120 false positive results was obtained from the negative specimens (resolved by repeat testing).

Conclusion

Our results indicate that Multitrans and M4-3 are comparable to the Abbott transport for the detection of CT and NG with the LCR assay. The dilution protocol is less labor intensive than the centrifugation protocol and may be an acceptable alternative when specimens are collected in these devices for this assay.

Selected Conclusions

- Detection of *Chlamydia trachomatis* was equivalent in Multitrans and M4-3 for both LCR and PCR tests.
- Detection of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in spiked specimen sets was equivalent in Multitrans and M4-3 by LCR and PCR.

- Detection of the target organisms in clinical specimens and spiked specimens was similar using either the dilution or centrifugation protocols for LCR and PCR.