Polymerase Chain Reaction (PCR), a novel technique for screening of chlamydial infection in cases of Pelvic Inflammatory Disease (PID), comparative methodological study

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Arabic summary

Arabic abstract

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Abstract

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Abstract

Odette Wahba Hindy : Polymerase Chain Reaction (PCR). A novel technique for the screening of chlamydial infection in cases of Pelvic Inflammatory Disease (PID), comparative methodological study.

This study was undertaken to screen for *Chlamydia trachomatis* infection as a possible cause of Pelvic Inflammatory Disease(PID), in 50 female patients using a novel DNA amplification technique "Polymerase Chain Reaction (PCR)" with comparative methodological study by using two other laboratory techniques viz, ELISA *Chlamydia trachomatis* IgG antibodies in patient's sera, and *Chlamydia trachomatis* antigen detection on cervical swabs by Clearview test.

The positive qualitative detection of *Chlamydia trachomatis* in tested patients with clinically diagnosed PID, using PCR, Clearview and ELISA methods were 36%, 50% and 28% respectively. Sensitivity and specificity of the three methods were 95.24% & 100% in PCR & 83.33% & 68.75% in Clearview and 50% & 84.38% in ELISA. The predictive values (PV^+ & PV^-) of Clearview test were 60% & 88% respectively and in ELISA they were 64.29% & 75% respectively. Finally with the calculation of Likelihood ratio (LR^+ & LR^-) were in the following pattern: for PCR, 7.2 & 2.1; Clearview, 2.70 & 4.12 and ELISA, 3.2 & 1.7.

Conclusion : Polymerase Chain Reaction (PCR) technique is the most specific and sensitive method when compared with the two other methods "Clearview and ELISA", for detection of *Chlamydia trachomatis*. Although PCR technique is rather expensive and required skilled personnel to be carried out, it's specificity and sensitivity and accuracy in laboratory diagnosis of *Chlamydia trachomatis* infection outweigh these factors.

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