

In situ localization of *Chlamydia trachomatis* and Chlamydial Heat Shock Protein 60 in Endometrial Curettage Tissue of Recurrent Spontaneous Aborters

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Description

In India, genital infection with *Chlamydia trachomatis* is a major health problem in women because of high prevalence (upto 81%). During pregnancy, chlamydial infection may cause various perinatal complications including spontaneous abortion [1,2].

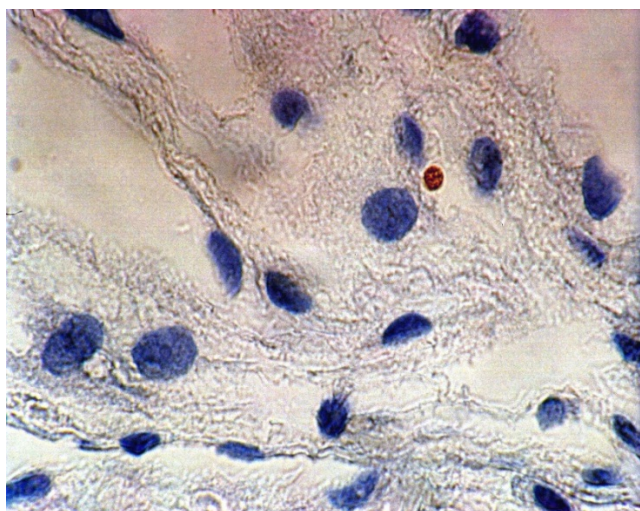


Figure 1: *In situ* localization of elementary body of *Chlamydia trachomatis* in the endometrial curettage tissue from patient undergoing recurrent spontaneous abortion (400X).

Also, immunity to chlamydial heat shock protein 60 (chsp60) is associated with upper genital-tract infection and presence of chsp60 may regulate process of abortion by stimulating macrophage function [2]. Hence, aim of this study was to investigate whether *C. trachomatis* is associated with spontaneous abortion in patients with prior history of three or more spontaneous abortions, viz.: Recurrent Aborters (RA). We used immunohistochemical approach to localize chlamydial infection within the endometrial curettage tissue (ECT) in women with spontaneous abortion. Immunohistochemical analysis confirmed *C. trachomatis* in ECT (11/ 100) (Figure 1). Also, double staining was done for *in situ* localization of macrophages (CD 68) and chsp60 (within the macrophages) in ECT (Figure 2). chsp60 was co-localized within macrophages in (72.7%) infected RA. Serum level of IgG antibodies to chlamydial heat shock protein-60 (chsp60) was

determined by using commercial kit as per manufacturer's recommendations (Medac, Germany). Among the Chlamydia-positive RA, 63.6% (7 of 11) showed presence of serum chsp60 antibodies. Results suggest definite need for *C. trachomatis* screening in women experiencing spontaneous abortion to prevent recurrent miscarriage.

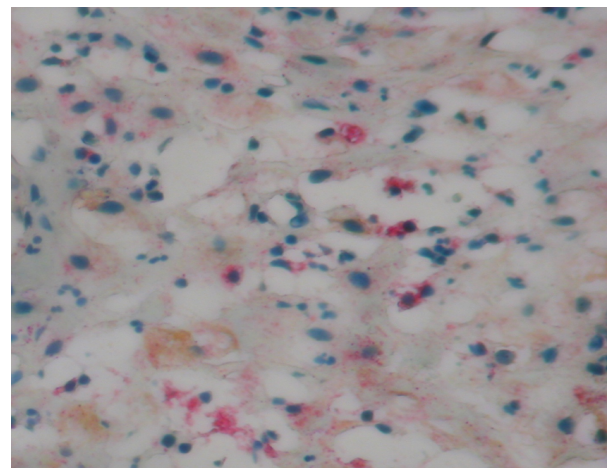


Figure 2: Dual staining for chlamydial heat shock protein 60 (red colour) and macrophages (CD 68; brown colour) in the endometrial curettage tissue from *Chlamydia trachomatis*-infected patient experiencing recurrent spontaneous abortion (200X).

Acknowledgements

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