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**Helicobacter pylori infection: Correlation to disease severity and Clarithromycin resistance in a Sri Lankan setting**

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**Background:** *Helicobacter pylori* is a causative agent of gastritis, gastric ulcer, duodenal ulcer and gastric cancer. Clarithromycin is often used in the treatment of *H. pylori* infections in Sri Lanka. Although resistance of *H. pylori* to clarithromycin has been reported in other countries the situation in Sri Lanka is an enigma. We determined clarithromycin resistance of *H. pylori* by detecting two major point mutations (A2142G and A2143G) in the 23S rRNA gene. Further we assessed the histology of gastric mucosa of dyspeptic patients as a reasonably good predictor of cancer risk specially, in *H. pylori* positive patients.

**Methods & Materials:** The study was a cross-sectional, descriptive study where 138 dyspeptic patients undergoing endoscopy examination were included. Ethical approval was granted from the ethical review committee, University of Sri Jayawardenepura (No-723). *H. pylori* infection was diagnosed by Polymerase chain reaction (PCR) amplification of the glmM gene of *H. pylori*. A2142G and A2143G point mutations associated with clarithromycin resistance were determined by PCR restriction fragment length polymorphism (RFLP). Histological features of the gastric mucosa were examined using H & E stain and gastritis was classified microscopically according to the updated Sydney system.

**Results:** Seventeen percent (24/138) of the dyspeptic patients were positive for *H. pylori* by PCR. Of them 13 were males (54%) while 11 were females (46%). All *H. pylori* strains had a point mutation at A2142G, while A2143G mutation was not detected. Based on histological findings, 15 patients were diagnosed as *H. pylori* associated chronic active gastritis. Though mild to moderate infiltration of polymorphonuclear and mononuclear cells were observed in all *H. pylori* positive patients, gastric atrophy and metaplasia were not observed.

**Conclusion:** This is the first report describing the presence of A2142G point mutation which is associated with clarithromycin resistance in a Sri Lankan population. It is therefore important to determine the eradication efficacy of *H. pylori* following clarithromycin treatment in Sri Lanka which can give an insight regarding the pheno-typical expression of the A2142G mutation. Further the proportion of *H. pylori* infections was found to be 17% in Sri Lanka.

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**Recurrent spontaneous abortion: Significance of early non-invasive detection of Chlamydia trachomatis infection**

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**Background:** Sexually transmitted *Chlamydia trachomatis* infection is common widespread public health concern worldwide, chiefly in women because of chronic oligosymptomatic/asymptomatic course of infection. These “silent infections” lead to devastating reproductive consequences such as spontaneous abortion. During pregnancy, collection of endocervical sample causes discomfort; also chorionic villous sampling is not done in India. It is thus important to investigate whether molecular diagnosis of *C. trachomatis* in non-invasive sample such as urine can assist in early detection of infection in recurrent aborters as this will result in development of better diagnostic modalities and control of this STD. Hence, the study aimed to investigate the frequency of *C. trachomatis* in urine/Endometrial Curettage Tissue (ECT) by PCR during early gestation in Recurrent Spontaneous Aborters (RSA).

**Methods & Materials:** With hospital ethics permission, ECT was collected from 90 women undergoing recurrent spontaneous abortion and 45 age-matched healthy pregnant women (control) undergoing induced abortion at Department of Obstetrics and Gynaecology, Safdarjung hospital (SJH), New Delhi (India). Urine was collected from 50 asymptomatic pregnant women (with history of two or more recurrent abortions) attending OPD in Department of Obstetrics and Gynaecology at SJH for routine check-up. Nucleic acid amplification test by *C. trachomatis* gene-specific PCRs was performed for *C. trachomatis* diagnosis in the ECT/urine.

**Results:** Overall, 15.5% (14/90) RSA were found to be *C. trachomatis*-positive for either MOMP/plasmid gene in the ECT. Among these, 10% (9/90) were positive for plasmid gene while the MOMP gene of *C. trachomatis* was present in 13.3% (12/90) RSA. Further, in the urine specimens of RSA, the prevalence of *C. trachomatis* infection was 20% (10/50) for either MOMP/plasmid gene. MOMP and plasmid were found in the urine of 20% (10/50) and 4% (2/50) patients, respectively. None of controls was found positive for either chlamydial MOMP/plasmid gene in ECT/urine.

**Conclusion:** Results indicate that urine PCR for chlamydial MOMP gene detected greater number of infected RSA. Apparently, PCR technique is a useful method for detecting *C. trachomatis* in urine because it represents a non-invasive and more convenient method for better clinical management/maintenance of pregnancy in first trimester RSA.

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