

H. Pylori: Isolation and Sensitivity from Biopsy Specimen of CLO Positive Patients

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Madam, Helicobacter pylori infection is associated with gastritis, peptic ulcer and gastric carcinoma; its eradication is therefore necessary¹⁻³. Triple drug therapy is used for the eradication of H.pylori which initially included a Bismuth salt, Metronidazole and an antibiotic⁴⁻⁸. Later macrolides were used with Metronidazole or amoxicillin and a proton pump inhibitor with good results⁹. The pathogen acquires resistance to most antibiotics making the treatment a challenge. Therefore it is important to check the antibiotic sensitivity and change combinations as required. We studied the sensitivity of H.pylori to 2 commonly used antibiotics.

Two antral gastric biopsies were taken from patients undergoing upper GI endoscopy for peptic ulcer symptoms. One biopsy was placed in CLO gel and the other was taken in screw cap bottle containing few drops of sterile normal saline. Specimens which were CLO positive were further processed in the microbiology laboratory. The biopsy in saline was chopped with sterilized scalpel blade and the emulsion was plated onto moist chocolate agar plate and incubated with campylobacter gas pack in an anaerobic jar at 37°C for 10 days. The plates were examined at intervals of 2,4,6 and 10 days for the presence of moist pin point translucent colonies. All suspected colonies were identified by standard methods and confirmed as H.pylori by standard tests¹⁰. Sensitivity of the isolates was carried out by incorporating 0.5ug/ml of 0.5g Metronidazole and 4/4 ug/ml of Ampiclox (Ampicillin + Cloxacillin) into chocolate agar plates and inoculated by spot inoculation method, incubated in anaerobic jar with gas pack for 10 days.

Of 85 patients checked for H.pylori 41 were CLO positive. The tissue biopsy yielded growth of H.pylori in 19 (46.3%) of 41 cases. Antibiotic sensitive pattern showed 16 (81.3%) resistant to Metronidazole with only 3 (18.8%) sensitive to it. Sensitivity to Ampiclox was seen in 9 (56.9%) cases only with 10 (43.8%) cases being resistant.

The success of eradication regimen depends upon the successful eradication of Metronidazole resistant strains¹¹.

Studies done locally on H.pylori associated duodenal ulcer showed ulcer healing and H.pylori eradication in 81% cases using triple therapy of Bismuth, Amoxil, Flagyl; indicating good eradication. At the end of 1 year, ulcer relapsed in 26%^{12,13} cases showing recurrence of infection. Thus in countries where Metronidazole resistance is high, this drug should either not be used for H.pylori eradication or should be combined with a good antibiotic to potentiate its effect.

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