Deteksi helicobacter pylori dengan metode biakan dan uji motilitas indol urease pada pasien dispepsia = Detection of helicobacter pylori using culture methode and motility indol urease test in dyspepsia patient

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Abstrak

Latar Belakang: Diagnosis definitif Helicobacter pylori H.pylori hingga kini masih merupakan masalah. Biakan untuk isolasi dan identifikasi bakteri ini sulit. Uji cepat urease direkomendasikan sebagai uji diagnostik lini pertama pasien dispepsia.
Tujuan: Mengembangkan komposisi medium biakan dan deteksi cepat H.pylori pada spesimen biopsi lambung pasien dispepsia.
Metode: Desain penelitian merupakan studi potong lintang dan eksperimental laboratorium. Sampel diambil dengan cara consecutive sampling sebanyak 68 spesimen biopsi lambung 34 antrum, 34 korpus, masing-masing untuk biakan dan uji MIU. Sebagai pembanding digunakan histopatologi dan PCR. Mula-mula dilakukan optimasi medium biakan dan MIU konsentrasi merah fenol, pH, urea dan suhu inkubasi. Selanjutnya kondisi optimal yang diperoleh diaplikasikan pada spesimen biopsi pasien dispepsia.
Hasil: Medium biakan agar darah Columbia ditambah vankomisin 5 mg / 500 mL dan darah domba 7 belum optimal, namun dapat digunakan untuk isolasi dan identifikasi. Hasil MIU modifikasi sebagai berikut: konsentrasi merah fenol 0,001 ; urea 4 ; pH medium 7; Suhu inkubasi optimal 35-370 C. Proporsi positif hasil uji MIU sebesar 35,29 12/34, biakan 32,35 11/34, PCR 32,35 11/34 dan histopatologi 20,59 7/34.
Kesimpulan: Pemeriksaan MIU meningkatkan positivitas hasil pemeriksaan sebesar 14,7 bila dibandingkan dengan histopatologi.
.....Background: Until now, definitive diagnostic of H.pylori is still a problem. Culture for isolation and identification of this pathogen is difficult. Rapid urease test is recommended as a first line diagnostic test.
Aim: To obtain optimal composition for culture medium and Motility Indol Urease MIU test for the detection of H. pylori in dyspeptic patient biopsy specimens.
Method: A cross sectional and experimental laboratory study was performed. Sixty eight gastric biopsy samples 34 antrum, 34 corpus were collected by consecutive sampling method for culture and MIU test. Histopathology and PCR were conducted for comparison. Initially, we performed the optimation of culture medium and MIU test phenol red and urea concentration, pH, and temperature. The optimal condition obtained was then applied to the specimens.
Result: Columbia agar supplemented with vancomycin 5 mg 500 mL and 7 sheep blood was unable to create an optimal condition, but it can be used for isolation and identification. Modified MIU was performed by this following condition phenol red 0,001 urea 4 pH 7 incubation temperature 35 37oC. Positive proportion of MIU was 35.29 12 34, culture 32.35 11 34, PCR 32,35 11 34 and histopathology 20.59 7 34.
Conclusion: MIU test was able to improve the positivity rate by 14,7 compared to histopathology.