

## Pemeriksaan mikroskopik lekosit tinja sebagai metoda sederhana mendeteksi kolitis infeksi pada anak = Fecal microscopic test as a simple method to detect infective colitis in children / Nuraini Irma Susanti

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### Abstrak

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Latar belakang. Kolitis infeksi adalah proses inflamasi pada usus besar yang disebabkan oleh infeksi bakteri patogen, seperti Shigella, Salmonella, E.coli, dan Campylobacter. Dibuktikan dengan pemeriksaan kultur tinja, tetapi biayanya cukup mahal, perlu waktu dan tidak selalu tersedia di semua fasilitas kesehatan.

Rekomendasi WHO jumlah lekosit lebih dari 10 per LPB untuk Shigella dysenteriae dengan klinis disentri dan merupakan indikasi pemberian antibiotika. Sering ditemukan anak diare dengan lekosit kurang dari 10/LPB tetapi hasil kultur positif bakteri patogen. Mencari hubungan jumlah lekosit tinja dengan kejadian diare yang disebabkan infeksi bakteri patogen yang memerlukan terapi antibiotika.

Tujuan. Mengetahui prevalensi, sebaran bakteri patogen, nilai leukosit mikroskopik tinja pada anak dengan kolitis infeksi bakteri. Mengetahui hubungan leukosit tinja dengan kultur tinja dan pola sensitivitas antibiotika pada kolitis infeksi bakteri.

Metode. Penelitian deskriptif dengan metode potong lintang dan uji diagnostik untuk menilai sensitivitas hitung leukosit tinja untuk mendiagnosis kolitis infeksi bakteri. Penelitian dilakukan di Rumah Sakit Umum Pusat Rujukan Nasional Cipto Mangunkusumo, Jakarta, dari bulan Januari- Juni 2015.

Hasil. Dari 45 subjek penelitian ditemukan kultur positif pada 19 subjek (42,2%). Bakteri terbanyak yang ditemukan adalah E.coli (79%), Salmonella sp. (10,5%), dan C.difficile (10,5%). Pada titik potong ROC ditemukan nilai lekosit >8 per LPB dengan sensitivitas 0,654 dan spesifisitas 0.632. E.coli masih memperlihatkan sensitivitas cukup tinggi terhadap kloramfenikol dan siprofloksasin tetapi tidak terhadap sefiksime. Salmonella sp. sensitif terhadap kloramfenikol, sefiksime, dan seftriakson, sedangkan C. difficile sensitif terhadap Seftriakson.

Simpulan. Pada penelitian ini ditemukan sebanyak 19 (42,2%) subyek penderita diare hasil kultur tinja positif bakteri patogen dan pada titik potong ROC ditemukan nilai lekosit > 8 per LPB dengan sensitivitas 65.4% dan spesifisitas 63.2%. Pada pola sensitivitas antibiotika, E.coli sensitif terhadap kloramfenikol dan siprofloksasin dan Salmonella dan C.difficile sensitif terhadap seftriakson.

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<b>ABSTRACT</b><br>

Background. Infective colitis is an inflammatory process in the colon caused by pathogenic bacterial infection, such as Shigella, Salmonella, E.coli, and Campylobacter. Diagnosis is made by fecal culture, but the cost is relatively expensive, time-consuming, and not readily available in every health facility. WHO recommends that fecal leukocyte more than 10 per HPF for the diagnosis of Shigella dysenteriae with clinical symptom of dysenteriae and indicated for antibiotic treatment. Often there are diarrheic children with leukocyte less than 10/HPF but the culture is positive for pathogenic bacteria. This study would like to look for the relationship between fecal leukocyte and incidence of diarrhea caused by pathogenic bacteria

infection that requires antibiotic therapy.

**Objective.** To study the prevalence, distribution of pathogenic bacteria, leukocyte count in fecal microscopic test in children with bacterial infective colitis. To study the relationship between fecal leukocyte and fecal culture with sensitivity pattern of antibiotics in bacterial infective colitis.

**Methods.** Descriptive, cross-sectional study and diagnostic test to study the sensitivity of fecal leukocyte count in diagnosing bacterial infective colitis. Study was performed in the Cipto Mangunkusumo Hospital, Jakarta, from January to June 2015.

**Results.** From 45 study subjects, positive culture was found in 19 subjects (42.2%), and the most common bacteria were *E.coli* (79%), *Salmonella* sp. (10.5%), and *C. difficile* (10,5%). At the ROC we found leukocyte count >8 per HPF as cutoff point with 0.654 sensitivity and 0.632 specificity. *E. coli* still showed relatively high sensitivity to chloramphenicol and ciprofloxacin, but not to cefixime. *Salmonella* sp. were sensitive to chloramphenicol, cefixime, and ceftriaxone, while *C. difficile* were sensitive to ceftriaxone.

**Conclusion.** In this study there were 19 (42.2%) subjects with diarrhea, with positive fecal culture for pathogenic bacteria. At the ROC cutoff point we found leukocyte count > 8 per HPF with 65.4% sensitivity and 63.2% specificity. On the antibiotic sensitivity pattern, *E. coli* was sensitive to chloramphenicol and ciprofloxacin, while *Salmonella* dan *C.difficile* were sensitive to ceftriaxone, Background. Infective colitis is an inflammatory process in the colon caused by pathogenic bacterial infection, such as *Shigella*, *Salmonella*, *E.coli*, and *Campylobacter*. Diagnosis is made by fecal culture, but the cost is relatively expensive, time-consuming, and not readily available in every health facility. WHO recommends that fecal leukocyte more than 10 per HPF for the diagnosis of *Shigella* dysenteriae with clinical symptom of dysenteriae and indicated for antibiotic treatment. Often there are diarrheic children with leukocyte less than 10/HPF but the culture is positive for pathogenic bacteria. This study would like to look for the relationship between fecal leukocyte and incidence of diarrhea caused by pathogenic bacteria infection that requires antibiotic therapy.

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