p-ISSN 0030-9311
e-ISSN 2338-478x

Volume 53 • No. 5 (Supplement) • October 2013

Paediatrica Indonesiana

(The Indonesian Journal of Pediatrics and Perinatal Medicine)

Abstracts of
the 6th Annual Pediatrics Scientific Meeting,
Indonesian Pediatrics Society,
Solo, Indonesia
7-9 October 2013

Published by
Indonesian Pediatric Society

Paediatrica Indonesiana

VOLUME 53 Supplement • 2013 NUMBER 5

Infection and Tropical Disease

INF-PP-2-2-043

Challenges in diagnosing scabies

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Abstract

Scabies exist all over the world with prevalence 300 million cases per year. A research conducted by Indonesia's Pediatric Dermatology Study Group in 2001 showed scabies are found frequently in Jakarta compared to other 6 big cities included in the study. Scabies are often misdiagnosed by paediatricians as atopic dermatitis, eczema, tinea, or pyoderma, therefore scabies is namely a great imitator. The aim of this report is to remind pediatricians for diagnosing scabies. A 5-year-old boy complained itchiness in his interdigitalis area, elbow, bottom, groin, and feet, which worsened mostly at nights and getting worse each day. He has no history of allergy. Complaints started 2 weeks ago when his aunt who lived in a boarding school moved to his house in a slum area. His aunt, mom and grandmother have same complaints. On physical examination, there were papules, erosions, excoriations, and yellow crusts on his interdigitalis area, volar part of his wrists, and on his elbows. A direct examination was done by skin scrapies on the interdigitalis area and wrist to be examined in the dermatolo-venereology department. *Sarcoptes scabiei* were found and the diagnosis of scabies is proven. This patient was given permetrin 5% and some advices about treating scabies. A patient with a complaint of itchiness and a history of a close contact with another person with the same complaint should increase awareness of suspected scabies. Diagnosing scabies is not simple, but by making the correct diagnosis and prompt treatment scabies could be eradicated.

Keywords: scabies, great imitator, itchiness

INF-PP-2-2-044

Clinical and laboratory profiles of typhoid fever in children below 2 years old

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Abstract

Background Typhoid fever is common in children above 3 years old. In developing countries more data have shown increased numbers of children below 2 years old. The clinical features in infants and young children are usually non specific and vary. There has been no study on typhoid fever under 2 years old in Soetomo Hospital.

Objective To describe the clinical and laboratory profiles of typhoid fever in children below 2 years old admitted to Soetomo Hospital.

Methods A cross sectional medical record based study was performed at the pediatric ward Soetomo Hospital from January 2008 until Desember 2011. The clinical profiles and laboratory data were collected. The diagnosis of typhoid fever was based on the clinical presentation and positive IgM Salmonella Typhi (tubex) ≥4.

Results Twenty-three cases were admitted; 9 were below 13 months old. Patients presented fever (23), vomiting (13), diarrhea (9), constipation (5), nausea (3) and anorexia (8). Twelve children had cough, and seizures (2). Hepatomegaly were found in 3 and and meteorism in 4 children, respectively. Eight patients had leucocyte count above (10,000/cu mm), while leucopenia (<5000/cu mm) was present in 7 children. Seven children had trombocytopenia and 9 were anemic. There were 8 children with bronchopneumonia

Conclusion Typhoid fever below 2 years old present fever, vomiting, diarrhea, constipation, nausea, anorexia, cough, and seizures, along with hepatomegaly, meteorism, leucocytosis, thrombocytopenia, and anemia. Some developed bronchopneumonia.

Keywords: child, typhoid fever, clinical manifestation, laboratories

CLINICAL PROFILE THYPOID FEVER IN CHILDREN BELOW 2 YEARS OF AGE AT SOETOMO HOSPITAL SURABAYA

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ABSTRACT

Background: Typhoid fever continues to be a major health problem in developing countries. It is considered less common in children below 5 years of age, but lately the prevalence was increasing in this age group . The clinical features of the disease in infants and young children are nonspecific, vary significantly, are usually severe and take a longer time for recovery. However, limited population-based surveillance data are available for the burden of typhoid fever and/ or bacteremia among children < 2 years old, and especially among infants younger than 12 months.[1]

Objective: To describe the thypoid prevalence among hospitalized children and the clinical profile in children below 3 years of age.

Methods: A retrospective study was performed on medical records of children with typhoid fever in the age group below 3 years admitted to the Tropic and Infection disease Ward during January 2008 to December 2011. Complete data on the clinical profile and laboratory investigations was analyzed. The diagnosis of typhoid fever was made on the clinical presentation and supported by one or more of the following laboratory parameters: IgM Salmonella typhi, gul culture or a single 'O' and 'H' Widal titre of >l:160.

Results: A total of 47 cases of typhoid fever under 3 years were admitted to the pediatric ward during these 4 years. Of these 47 children, a majority 40 patients were between 1 to 3 years of age, 7 cases were seen in 6 months-1 years of age. The clinical presentation of these patients is listed in Table I. Salmonella typhi was isolated from 1 cases, and 1 was negative. Igm salmonella/tubex was positive in 40 cases. Widal was positive in 8 cases. Gal culture was negative. Seventeen patients had leucocytosis (>10,000/cu mm), 19 patient with lecocyte 5000-10,000,and while leucopenia (<5000/ cu mm) was present in 11 patients. Ileus was complications had seen in 1 patients. Gastrointestinal hemorrhage or perforation was not seen in any patient.

Conclusion

Typhoid fever under 2 years presented as fever, vomiting, diarrhea, constipation, nausea, anorexia, cough, and seizures, along with hepatomegaly, meteorism, leucocytosis, thrombocytopenia

INTRODUCTION

Typoid fever is a food and waterborne disease caused by Salmonella enterica serotype typhi (S typhi), is a serious public health problem in developing countries that claims 600000 lives every year. Salmonella typi is responsible for the occurrence of enteric fever, which is likely a fatal multisystemic disorder. The diagnosis of typhoid fever is challenging because of the diversified clinical manifestations.[1]

Methods: A retrospective study was performed on medical records of children with typhoid fever in the age group below 3 years admitted to the Tropic and Infection disease Ward during January 2008 to December 2011. Complete data on the clinical profile and laboratory investigations was analyzed. The diagnosis of typhoid fever was made on the clinical presentation and supported by one or more of the following laboratory parameters: IgM Salmonella typhi, gul culture or a single 'O' and 'H' Widal titre of >I:160.

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Table 1. Characteristic data

No	Characteristic	Number
1	Age	
	< 13 month	9 children
	>13 month	14 children
2	Sex	
	Male	12 children
	Female	11 children

Tabel 2. Clinical profile

No	Clinical profile	Numbers
1	Fever	23
2	Vomiting	13
3	Diarrhea	9
4	Constipation	5
5	Nausea	3
6	Anorexia	8
7	Cough	20
8	Seizures	2
9	Hepatomegaly	3
10	Meteorism	4
11	Bronchopneumonia	8

Diagram 1. Leucocyte profiles

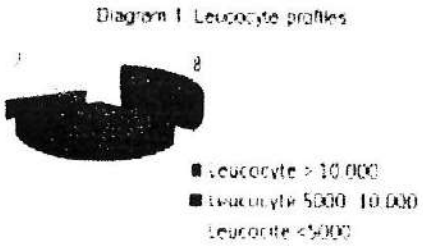


Diagram 2. Trombocyte profiles

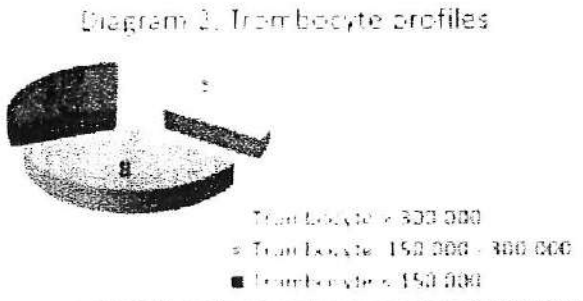
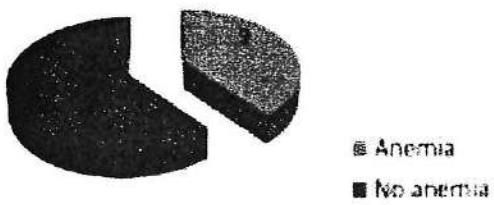


Diagram 3. Hemoglobine profiles



Discussion

Typhoid fever is a global health problem and accounts for significant cause of morbidity in children in developing countries. Its real impact is difficult to estimate because the clinical picture is confused with those of many other febrile infections.[2] The incidence of typhoid fever in young children was increase has been reported earlier and most severe in children less than 2 years old compared to other age groups. Children under 5 years of age are at highest risk of severe complications and death. [3-4]

Owais *et al* (2010), in they study in Pakistan show, the incidence of typhoid bacteremia in children < 2 years of age was 443.1 (95% CI: 193.8–

876.5) per 100,000 child-years and in infants under 12 months of age was 506.4 cases per 100,000 child years (95% CI: 160.9–1222.0). The overall incidence of typhoid bacteremia in children < 5 years old was 405.1 (95% CI: 239.8–643.8) per 100,000 child-years.[5]

The clinical presentation of typhoid fever in infants and young children can be varied and non-specific. Typhoidal illness can range from a mild, non-specific febrile illness, to clinical or radiologic pneumonia, or severe illness with features of the classic typhoidal syndrome (high fever, toxicity, hepatomegaly, and splenomegaly) which can be fatal and in small children, diarrhoea is more common. Low white blood cell counts occur in 16% to 46% of patients. [6] Owais *et al* (2010), show the most common clinical diagnosis given to children with typhoid or paratyphoid bacteremia was pneumonia, enteric fever, upper respiratory infection and 1 case of febrile illness of unknown origin. Among all children given a diagnosis of pneumonia. The median (range) temperature of 38.5(37.4–40.5) °C. The children < 24 months old had a lower mean temperature.[5] This study similar with another study from Khanam et al (2015), in young children mean temperature was 39.1 (39,0-39,4) °C. The common symptom were loss of appetite, diarrhea, abdominal pain, and coated toungue but they not found hepatomegaly.[7]

Moderate to high grade fever of more than >6 days duration was the commonest presentation. Non specific symptoms like cough, diarrhea,

vomiting and anorexia were also common. Hepatomegaly was more frequently seen than splenomegaly. Almost normaly leucosite in this study.

Unfortunately, laboratory tests for typhoid fever have a low sensitivity (meaning they often give false-negative results). This means that suspected typhoid patients should be treated with antibiotics, and the treatment should be completed, even if laboratory tests come back negative.[8]

Blood culture has remained the gold standard test in diagnosis of typhoid fever but the sensitivity is less than 50% (Figure 1). This sensitivity will be even lower after the first week of illness[8], but another study show the blood culture carry 70-75% diagnostic yield in the first week of illness,[9] and 5–10 mL of blood should be used for 1 or 2 culture bottles. There is a 29% decrease in positive cultures per mL as less blood is cultured. It is important that the blood sample is collected before the patient is treated. Treatment with antibiotics will significantly lower the sensitivity. Any delay in transporting the sample to the laboratory will also decrease the sensitivity.[8]

Urine and stool culture can be used after the first week, but these are generally less sensitive than blood culture (Figure 1). Bone marrow culture, although very sensitive, is rarely done.

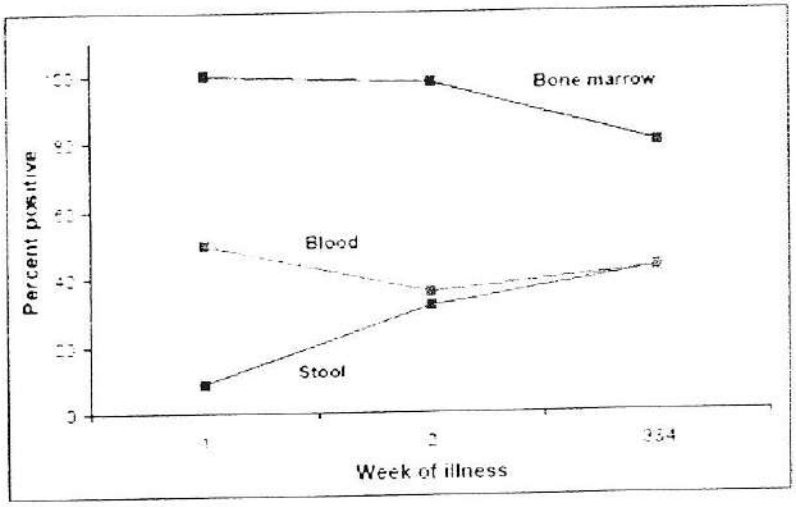


Figure 1. Sensitivity of culture methodes for thyphoid fever.[8]

In spite of the limited usefulness of diagnostic tests for patient management, it is still very important to request blood and stool culture for confirmation and, most importantly, to monitor possible development of antibiotic resistance of the bacteria. Stool culture is also done for monitoring carrier status, although the sensitivity is, again, quite low.[3,6]

Duodenal aspirate culture has also proved highly satisfactory as a diagnostic test but has not found widespread acceptance because of poor tolerance of duodenal aspiration, particularly in children [2] Lin et al (2000), working in the Mekong delta of Vietnam, found no cases of typhoid bacteremia in infants < 24 months old. In this study, salmonella typhi was isolated from 1 case and the result was negative.

The Widal test is an old serological test, which is not useful because of the very low sensitivity and specificity. The Widal test should not be used any longer as a diagnostic test. In this study we found 8 cases with widal positive.[8]

Conclusions: The thypoid symptoms in children under 3 years were non specific. Prolonged fever and hepatosplenomegaly even with normaly leucosite were common..

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CERTIFICATE

This is to certify that

Dominicus Husada

Has attended in

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Chairman of the Committee

GALERI] PERTEMUAN ILMIAH TAHUNAN ILMU KESEHATAN ANAK KE-6 (PIT VI)

to Kegiatan PIT IKA 6 Solo yang diselengarakan pada tanggal 5-9 Oktober 2013, dengan topik acara "Acceleration of DGs 2015 Achievement with Comprehensive Management of Pediatric Problems".

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IMG_5404

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