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8	○-GAH-008	Histopathology liver biopsy in cholestasis jaundice patients at Dr. Soetomo Hospital	19
9	○-GAH-009	Effect of ursodeoxycholic acid therapy on hepatic function in children with intrahepatic cholestatic disease	20
9	○-GAH-010	Comparison of aminotransferases serum level between proven and probable neonatal sepsis	20

### Oral Presentations: Infection & Tropical Pediatrics

10	○-INF-001	Association between platelet count and cured rate in children with malaria	21
10	○-INF-002	Association between opportunistic infection types and mortality of human immune deficiency virus/acquired immune deficiency syndrome pediatric patients at Dr. Kariadi Hospital, Semarang	21
11	○-INF-003	Outbreak of probable meningococcus infection at high care unit Dr. Saiful Anwar Hospital	22
11	○-INF-004	Validity of Royal College of Paediatrics and Child Health London score to predict serious bacterial infection in children	22
12	○-INF-005	Relationship between serum nitric oxide and poor outcome in neonatal sepsis	23
12	○-INF-006	The use of intravenous immunoglobulin in neonatal sepsis: Dr. Sardjito Hospital experience on 2013-2014	23
12	○-INF-007	Diagnosis of children with fever at Dr. Soetomo Hospital, Surabaya	24
13	○-INF-008	Procalcitonin profiles of dengue virus infection in children	24
13	○-INF-009	The association between the level of antithrombin III and mortality in children with sepsis	25
14	○-INF-010	Serology detection of congenital hearing loss and rubella infection	25

### Oral Presentations: Respiriology

15	○-RES-001	Flexible bronchoscopy in children, is it safe enough?	26
16	○-RES-002	Risk factors for active tuberculosis in household children contact with smear-positive adult tuberculosis	26
16	○-RES-003	Relationship between calcium levels with asthma attack in children	27
17	○-RES-004	Rational use of antibiotic in children with upper respiratory tract infection	27
17	○-RES-005	Hospital malnutrition among pediatric pneumonia patients at Dr. Moewardi Hospital	28
17	○-RES-006	Risk factors of severe pneumonia among children age 1-60 months in Dr. Soetomo Hospital: a case control study	28
17	○-RES-007	Effectiveness of first 72 hours empirical antibiotic for pediatric pneumonia therapy at Dr. M. Djamil Hospital, Padang	29
18	○-RES-008	Risk factors of tuberculosis in severe malnutrition children	29
18	○-RES-009	The association between allergic rhinitis and severity of asthma in Indonesian children	30
19	○-RES-010	Spirometry profiles of pediatric patients in respirology outpatient clinic Dr. Cipto Mangunkusumo Hospital, Jakarta	30



O-INF-A

O-INF-008

## Diagnosis of children with fever at Dr. Soetomo Hospital, Surabaya

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### Abstract

**Background** Fever is a common illness in children under five years, comprising 10-20% of healthcare visits. Infectious diseases are common in this age group, especially in a developing country like Indonesia.

**Objective** To describe diagnosis and associated laboratory findings in children under five years with fever.

**Methods** A prospective study was conducted at Dr. Soetomo Hospital from 2008 to 2009. Subjects were children aged 28 days to <60 months. Fever was assessed as axillary temperature  $\geq 38^{\circ}\text{C}$ . All subjects underwent blood examination and culture, and chest X-ray (CXR) if needed. We collected demographic, clinical and laboratory data.

**Result** One thousand four hundred one children (56.3% males) with temperature  $\geq 38^{\circ}\text{C}$  were included. Most subjects (59.1%) were 3 months-3 years old. Final diagnosis was predominantly dengue virus infection (35.8%) in which, dengue fever was 256 (18.3%) and dengue hemorrhagic fever was 249 (17.8%), Pneumonia Clinical Syndrome/PCS (21.3%), febrile convulsion (11%), acute pharyngitis (8.8%), and acute diarrhea (6.4%). The most commonly encountered findings in blood culture were *Staphylococcus* 127 (14.7%) and *Pseudomonas* 19 (2.2%). In 259 PCS patients, common CXR results were patchy infiltrates (64%), consolidation (3.5%) and air bronchogram (2.5%). In this study, 27 patients (1.9%) died; 16 patients due to respiratory failure (59%), 6 due to shock (22%) and 2 due to sepsis (7%).

**Conclusion** Most common diagnosis in children who came with fever were dengue virus infection, PCS, febrile convulsion, acute pharyngitis and acute diarrhea. *Staphylococcus* spp. and *Pseudomonas* were the most common findings in blood culture.

**Keywords:** children with fever, final diagnosis

## Procalcitonin profiles of dengue virus infection in children

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### Abstract

**Background** Dengue haemorrhagic fever (DHF) is still prevalent in Indonesia with 71 686 cases were reported in 34 provinces and with the death of 641 people, mostly caused by dengue shock syndrome (DSS) and bleeding. Some severe dengue cases were referred to hospital with suspicion of sepsis with elevated levels of procalcitonin, which led to increased use of antibiotics in cases of dengue infection.

**Objectives** To show PCT profiles of dengue virus infection in children.

**Methods** A prospective, consecutive sampling, and non-randomized study in dengue infection cases, age 1 month to 18 years was conducted at Fatmawati General Hospital since April to May, 2015. Diagnosis of dengue infection based on criteria of World Health Organization (WHO) 2011.

**Result** There are 34 dengue cases, with male patients more than female patients (ratio 1.131), with median age was 10.5 years old. Diagnosis of dengue infection from those cases are DHF (21 cases), dengue fever (DD) (7 subjects), DSS (4 subjects), and DSS with coinfection (2 subjects). Only 15 out of 34 cases of dengue infection with PCT levels  $\geq 0.5$  ng/mL which consist of DD 2 out of 7 cases, DHF 9 out of 21 cases, and DSS 4 out of 6 cases. All cases of DSS with co-infection have PCT  $\geq 2$  ng/mL.

**Conclusion** The PCT profile on dengue infections shows increased PCT levels correlated with the severity of dengue infection. PCT levels  $\geq 2$  ng/mL can be suggested as a cut-off point of DSS with coinfection who showed significant clinical infection in severe dengue.

**Keywords:** PCT, dengue infection

## Diagnosis of children with fever at dr. Soetomo Hospital Surabaya

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**Background:** Fever is a common illness in children under five year, comprising 10-20% of healthcare visits. Infectious diseases are common in this age group, especially in developing country like Indonesia.

**Objective:** To describe diagnosis and associated laboratory findings in children under five year with fever.

**Methods:** Prospective study was conducted at dr. Soetomo Hospital from 2008 to 2009. Subjects were children aged 28 days to <60 month. Fever assessed as axilla temperature  $\geq 38^{\circ}\text{C}$ . All subjects underwent blood examination and culture, and Chest X Ray (CXR) if needed. We collected demographic, clinical and laboratory data.

**Result:** Eight hundred sixty three children were included. Most subjects were 3 months-3 years old (85.6%) and had high grade fever  $\geq 38.9^{\circ}\text{C}$  (72.9%). Final diagnosis mostly were Pneumonia Clinical Syndrome/ PCS (36%), acute pharyngitis (21%), acute diarrhea (16%) and sepsis (11%). Leukocytosis was found in 210 (24.3%) children. The most common findings in blood culture were *Staphylococcus spp.* in 127/863 (14.7%) and *Pseudomonas spp.* in 19/863 (2.2%) isolates. In 311 children with PCS, common CXR result were patchy infiltrat (64%), consolidation (3.5%) and air bronchogram (2.5%). In this study, 20 patients (2.3%) died. Sixteen (80%) patients died due to respiratory failure, 2(10%) due to sepsis and 2(10%) due to other causes.

**Conclusion:** Most common diagnosis in children under five years who came with fever were PCS, acute pharyngitis and acute diarrhea. *Staphylococcus spp.* and *Pseudomonas spp.* are the most common findings in blood culture.

**Keywords:** *Children with fever, final diagnosis*

## BACKGROUND

Fever is probably the commonest reason for a child to be taken to the doctor. Between 20 and 40% of parents reporting such an illness each year.<sup>1</sup> Despite advances in healthcare, infections remain the leading cause of death in children under the age of 5 years. Fever in young children can be a diagnostic challenge for healthcare professionals because it is often difficult to identify the cause. In most cases, the illness is due to a self-limiting viral infection. However, fever may also be the presenting feature of serious bacterial infections such as meningitis or pneumonia.<sup>2</sup>

The evaluation of febrile children younger than 60 months has long presented the challenge for physicians of ensuring that children with serious bacterial infection are appropriately identified and treated, while minimizing the risks associated with invasive testing, hospitalization, and antibiotic treatment.

This article focuses on previously healthy febrile children younger than 60 months.

## METHOD

This was a hospital-based study done at Dr Soetomo hospital in Surabaya, East Java, Indonesia from 2008 to 2009. The parent(s) or legal guardian(s) of participants completed the informed consent process.

Final case diagnoses were recorded either on Day 10 or the day of hospital discharge, whichever occurred first. Case definitions were as follows:

- Fever: Axillar temperature  $\geq 38^{\circ}\text{C}$
- Meningitis clinical syndrome: At least one of the following usually with fever: stiff neck, altered or decreased consciousness, bulging fontanelle, toxic appearance, lethargy, poor sucking and irritability, petechial or purpural rash, convulsions [3,4]
- Clinical pneumonia syndrome: Tachypnea ( $>50$  breaths/minute if subject was aged  $<12$  months or  $>40$  breaths/minute if subject was aged 12 months to  $<60$  months) and/or cough and/or difficulty breathing. A chest radiograph was obtained in children with clinically-suspected pneumonia.
- Dengue fever and dengue hemorrhagic fever: fever, trombocytopenia, hepatplenomegaly and leucopenia with or without laboratory confirmation.

The study enrolled a sample of convenience consisting of all children aged Subjects were children aged 28 days to  $<60$  months who presented to our hospital with a measured temperature or history of measured temperature  $\geq 38.0^{\circ}\text{C}$  within 24 hour.

By counting the number of patients treated for fever and the final diagnosis of the patients we could better estimate the total number of children  $<5$  years of age who were at risk for hospitalization due to severe diseases, such as meningitis, and pneumonia.

## RESULT

One thousand four hundred one children admitted with axillar temperature  $\geq 38^{\circ}\text{C}$ . There were 788 (56.3%) male and 613 (43.7) female. Age range between 28 days  $<60$  months old with frequencies as follows

Table 1. Age classification of the subjects

	Frequency	Percent
< 3 months	37	2.6
3 months - 3 years	828	59.1
> 3 years	536	38.3
Total	1401	100.0

Obtained data of final diagnosis are presented in figure 1

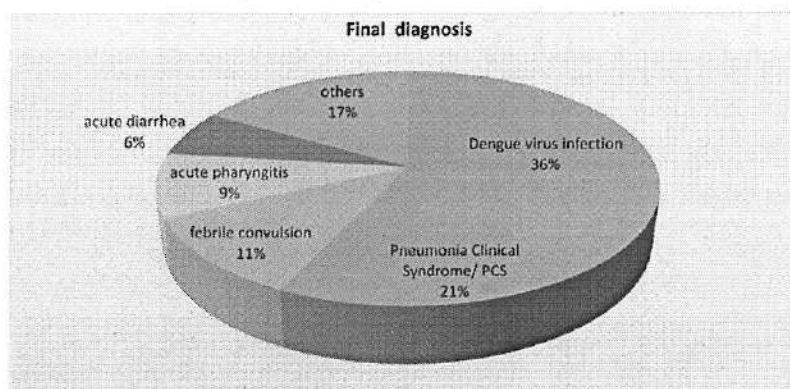


Figure 1. Final diagnosis of the patients with fever

In 259 PCS patients, common CXR results were patchy infiltrates (64%), consolidation (3.5%) and air bronchogram (2.5%). In this study, 27 patients (1.9%) died; 16 patients due to respiratory failure (59%), 6 due to shock (22%) and 2 due to sepsis (7%).

## DISCUSSION

Fever is probably the commonest reason for a child to be taken to the doctor. Feverish illness is also the second most common reason for a child being admitted to hospital.<sup>3</sup> Infection is the most likely diagnosis in a child with fever, where the fever is usually of short duration and is associated with a focus in about three quarters of cases and without a focus in the majority of the remaining cases.<sup>4</sup> Despite advances in healthcare, infections remain the leading cause of death in children under the age of 5 years.<sup>5</sup> The evaluation of

febrile children younger than 60 months has long presented the challenge for physicians of ensuring that children with serious bacterial infection are appropriately identified and treated, while minimizing the risks associated with invasive testing, hospitalization, and antibiotic treatment. The epidemiology of febrile illness in children has changed dramatically with the introduction of several vaccines targeted at this age group, and with the use of antibiotic prophylaxis during childbirth. In the absence of community-based studies, this data may serve as an useful measure of epidemiology of the infection.<sup>6</sup>

In most cases, the illness is due to a self-limiting viral infection. However, fever may also be the presenting feature of serious bacterial infections such as meningitis or pneumonia. A significant number of children have no obvious cause of fever despite careful assessment. These children with fever without apparent source are of particular concern to healthcare professionals because it is especially difficult to distinguish between simple viral illnesses and life-threatening bacterial infections in this group.

In this study, it can be seen that in patient aged 1-60 months who came to our hospital, most of patient diagnosed as dengue infection (36%). Dengue fever is the most frequently occurring mosquito-borne viral disease worldwide. Dengue virus infections are endemic in most parts of the tropics area as in Indonesia. The wide clinical spectrum, which can range from an asymptomatic or mild febrile illness to a life-threatening hemorrhagic fever syndrome, constitutes a particular challenge for clinicians. Dengue has traditionally been held to be a disease of high population density tropical urban areas.

Other Viral infections, affecting mainly the upper respiratory tract (URT), are the cause of fever in about 90–95% of febrile children. In this study we found approximately 21% of feverish children would be diagnosed of Pneumonia Clinical Syndrome. Chest-X-Ray were performed to patient with respiratory symptoms which showed consistent findings to the illness. As many as 11% patient came with febrile seizure. A high fever does not necessarily mean a child has a serious illness. Most of the time, a febrile seizure does not cause any harm and the child usually does not have a more serious long-term health problem. Ear infections, a cold or other viral illness may trigger a febrile seizure.

This is consistent with the findings of acute tonsilopharyngitis and acute diarrhea which occurred in 9% and 6% patients respectively.

## CONCLUSION

<sup>6</sup>Most common diagnosis in children who came with fever were dengue virus infection, PCS, febrile convulsion, acute pharyngitis and acute diarrhea. *Staphylococcus* spp. and *Pseudomonas* were the most common findings in blood culture. It is the physician's primary role to identify the remaining 5–10% of children who have a bacterial infection and who may require antibiotic treatment.

## References:

1. Hay A. The prevalence of symptoms and consultations in preschool children in the Avon Longitudinal Study of Parents and Children (ALSPAC): a prospective cohort study. *Fam Pract.* 2005;22(367-74).
2. Hsiao A, Chen L, Baker D. Incidence and predictors of serious bacterial infections among 57 to 180 day old infants. *Pediatrics.* 2006;117:1695-9.
3. Heffernan R, Mostashari F, Das D, Karpati A, Kulldorf M, Weiss D. Syndromic surveillance in public health practice, New York City. *Emerg Infect Dis.* 2004;10:858-64.
4. Differential Diagnosis (DD) of Febrile Diseases. In: El-Radhi AS, Carroll J, Klein N, editors. *Clinical Manual of Fever in Children*: Springer Berlin Heidelberg; 2009. p. 259-85.
5. (WHO) WHO. Causes of death among children aged under five years. 2004.
6. (NICE) NifHaCE. Feverish illness: assessment and initial management in children younger than 5 years. 2013.





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Tema: Enhancing The Equality of Quality in Pediatric Science

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» PIT: 2-4 November 2015 di Hotel Shangri-La Surabaya



First Announcement 4

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