

Steven-Johnsons Syndrome/Toxic Epidermal Necrolysis (SJS/TEN) Study in Indonesia

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Purpose

- To share the current situation of SJS/TEN study in Indonesia
- To share the HLA allele frequencies of SJS/TEN markers in the population
- To introduce preliminary data of SJS/TEN from several hospitals in Indonesia



Indonesia (Jakarta) – USA (Bethesda)



- Indonesia spans from Sabang to Merauke
 - The capital is Jakarta
- It takes at least 22 hours by shortest flight from Jakarta – Washington DC

Indonesian Population

- Indonesian population: 240 million (BPS, 2010), consists of ± 300 ethnics
- Major ethnics (Ananta et al, 2013):
 - Javanese (J): 40.06%
 - Sundanese (S): 15.51%
 - Melayu (M): 3.7%
 - Bugis (BG): 2.7 %
 - Etc.



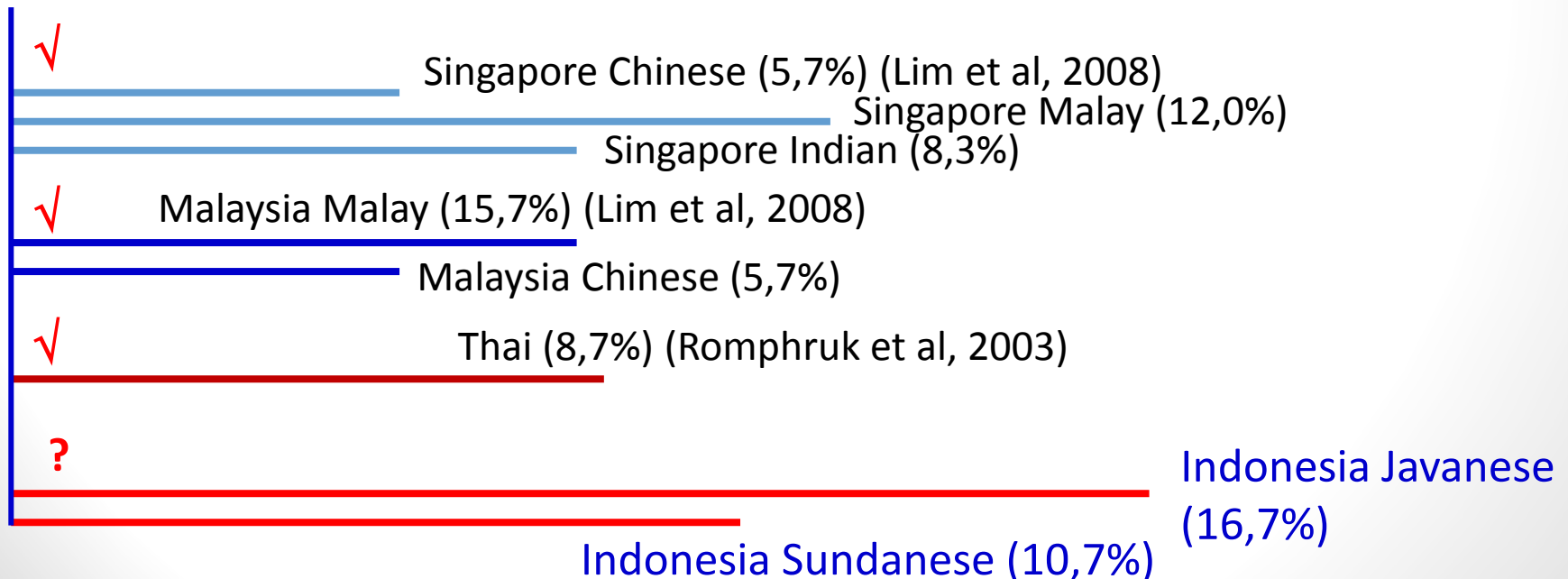
Current Situation of SJS/TEN Study in Indonesia

- Epidemiology:
 - No national epidemiological data
 - Very limited data --- Data is usually provided by request in some hospitals, but not easy to get the data quickly
 - Usage of traditional medical record (MR) rather than electronic one in most hospitals
 - Hospital recently use electronic MR, can not input all old MR
- Publication about SJS/TEN in Indonesia :
 - 1 published data in national journal –1 hospital in Sumatra Island
 - 1 upcoming published data with limited period (2011-2013) in national journal – 1 hospital in Central Java

No reported genetic study of SJS/TEN, but 2 potential genetic markers for SJS/TEN were observed in 2 most major populations (Yuliwulandari et al, 2008):
--- HLA-B*58:01 (Allopurinol) = 4.17% (Javanese), 5.97% (Sundanese)
--- HLA-B*15:02 (Carbamazepine) = 16.7% (Javanese), 10.7% (Sundanese)

✓ **B*15:02 as a marker for Carbamazepin (CBZ)-SJS/TEN have been reported in many countries including Southeast Asian Countries**

Comparison of B*15:02 frequency in Southeast ASIAN Countries



PRELIMINARY DATA OF SJS/TEN

Data of SJS/TEN from Several Hospitals in Indonesia

Type of cADR	Case
CBZ-SJS/TEN	10
Other drugs-SJS/TEN	48
Other forms of cADR	41



cADR: Cutaneous Adverse Drug Reaction

Why It is not easy to find CBZ-SJS/TEN in Indonesia?

- CBZ is used in Psychiatric and Neurologic Diseases:
 - Psychiatric Diseases – not as a single drug
 - Acute manic
 - Bipolar disorder
 - Children: Attention Deficit/Hyperactivity Disorder (ADHD) and Conduct Disease
 - Neurologic Diseases– can be single drug
 - Partial and Generalized seizure
 - Neuropathic pain, Neuralgia trigeminal, Post herpes zoster, Hernia Nucleus pulposus, Low back pain
- There are 2 types of Health services in Indonesia:
 - Hospitals, includes distric and central hospitals
 - CBZ is effective and cheap, but Valproic Acid and Phenytoin is preferred by clinicians ---- frightened of side effect of CBZ !!!
 - Public Health Services
 - Knowledge limitation: Epilepsy~ Luminal and Phenytoin, rather than CBZ

Most Causative Drugs Causing SJS-TEN

1. Anti viral: Nevirapine
2. Antiepileptic: Carbamazepin
3. Antibiotic: Cephalosporin, Cotrimoxazol, Cyprofloxacin, Sulfadiazine, Amoxicillin, Antileprocy, Tetracyclin
4. Nonsteroid Anti Inflammatory Drugs: Ibuprofen, Aspirin, Mefenamic Acid, Paracetamol, Metampiron, Pyroxicam
5. Allopurinol
6. Chloroquin
7. Traditional Medicine
8. Unknown

Most Causative Drugs causing Other forms of cADR

- Causative drugs:
 1. Diuretic: Furosemid
 2. Nonsteroid Anti Inflammatory Drugs: Paracetamol, Aspilet, Na Diclofenac, Metampiron, Ibuprofen
 3. Antibiotics: Cyprofloxacin, Cefadroxil, Cefixim, Ceftriaxon, Erythromycin, Oral Anti Tuberculosis, Cotrimoxazole
 4. Vitamin C
 5. Antiviral: Efavirenz
- Other Forms of cADR
 - Maculopapular eruption
 - Fixed Drug Erruption
 - Erythroderma

Conclusion

- In Indonesia:
 - There is no sufficient epidemiology data of SJS/TEN at local, regional and national level ---- needs further study
 - There is no genetic study on SJS/TEN ---- needs further study
 - There is a lack of sufficient knowledge about drug and side effect, especially in Public Health Services ---- Further education/training program for health workers about drug of choice and drugs causing cADR and how to prevent it are needed.

Thank You