Asia Pacific League of Associations for Rheumatology (APLAR)
AsPREN – Development of Asia-Pacific Pediatric Rheumatology Research and Education Network

For the AsPREN: Arkachaisri T, Bernal CB, Daengsuwan T, Phongsamart G, Vilayuks S, Charuvej C, Tang SP, Ang E, Sue MB, Hoh SF, Lim W

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Associate Professor
Duke-NUS Graduate Medical School and
Senior Consultant and Head
Rheumatology and Immunology
KK Women’s and Children’s Hospital, Singapore

ACR Annual Meeting, 2013. San Diego, CA
Tuesday, October 29, 2013, 4:30 to 6:00 PM

Disclosure

• I have no financial relationships to disclose
• I will not discuss off label use and/or investigational use in my presentation

Evidence-based Medicine


Objectives:

• Review the web-based “Registry for Childhood Onset Rheumatic Diseases (ReCORD) based in Singapore
• Describe the prevalence of pediatric rheumatic diseases in Asia-Pacific
• Review the developed pediatric rheumatology fellowship program started with ILAR funding

Southeast Asia: 11 countries

Objectives:

• Review the web-based “Registry for Childhood Onset Rheumatic Diseases (ReCORD) based in Singapore
• Describe the prevalence of pediatric rheumatic diseases in Asia-Pacific
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Proposed number of pediatric rheumatologists for each country in Southeast Asia (Service alone)

Based on guideline suggested by Spencer (2007) 1 PR per 300K – 500K children population just for clinical care, needs double if includes teaching and research.

Editorial

Why should pediatric rheumatology be recognized as a separate subspecialty: an open letter to medical councils and government agencies

Charles E. Spencer

Adviser: Department of Pediatrics, Nationwide Children’s Hospital/Ohio State University, Columbus, Ohio, USA

E-mail: E Spencer – chris@spencerdcp.com

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Proposed number of pediatric rheumatologists for each country in Southeast Asia (Service alone)

10/29/2013

www.aspren-record.com

AsPREN: 2009 - 2013

(Asia Pacific Pediatric Rheumatology Education and Research Network)

Grants supported from

- National Arthritis Foundation of Singapore (NAF)
- ILAR 2011

Record: Log In

ReCORD: Front page
ReCORD: First page

ReCORD: Lupus Registry

Sledai-2000

ReCORD: Back-end Main page

ReCORD: Back-end – Lupus activity

Objectives:

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As of March, 2013
Total = 3,626

Malaysia (3) *
754

Thailand (4) *
595

Philippines (10) *
711

Singapore (3) *
1,566

*number of pediatric rheumatologists

Distribution of pediatric conditions in Pediatric Rheumatology Clinics in Asia as compared to the West

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Singapore</th>
<th>Philippines</th>
<th>Thailand</th>
<th>Malaysia</th>
<th>Israel</th>
<th>India</th>
<th>USA</th>
<th>Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>1,566</td>
<td>711</td>
<td>754</td>
<td>2,286</td>
<td>249</td>
<td>1,209</td>
<td>3,269</td>
<td>1,228</td>
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<tr>
<td>Source of data</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>Duration of collection</td>
<td>24</td>
<td>24</td>
<td>24</td>
<td>19</td>
<td>35</td>
<td>282</td>
<td></td>
<td></td>
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</tbody>
</table>

JRA vs Non-JRA

**RPGN**: JIA Subtype Proportion

<table>
<thead>
<tr>
<th>AsPREN: Rheumatic conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Number</th>
<th>Systemic onset (%)</th>
<th>Oligoarticular (%)</th>
<th>Polyarticular (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taiwan*</td>
<td>146</td>
<td>8</td>
<td>90</td>
<td>96</td>
</tr>
<tr>
<td>Japan</td>
<td>570</td>
<td>54</td>
<td>21</td>
<td>25</td>
</tr>
<tr>
<td>North India</td>
<td>361</td>
<td>24</td>
<td>30</td>
<td>46</td>
</tr>
<tr>
<td>South India</td>
<td>331</td>
<td>13</td>
<td>35</td>
<td>52</td>
</tr>
<tr>
<td>Kuwait</td>
<td>108</td>
<td>29</td>
<td>29</td>
<td>42</td>
</tr>
<tr>
<td>Israel</td>
<td>520</td>
<td>18</td>
<td>64</td>
<td>18</td>
</tr>
<tr>
<td>USA</td>
<td>1,444</td>
<td>10</td>
<td>50</td>
<td>40</td>
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</tbody>
</table>

AsPREN: Rheumatic conditions

<table>
<thead>
<tr>
<th>Source of data</th>
<th>Malaysia</th>
<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
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</tr>
</tbody>
</table>

**HLA B27** +ve in 79.5%

**AsPREN**: JIA Subtype Proportion

<table>
<thead>
<tr>
<th>Source of data</th>
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<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
AsPREN: JIA Subtype Distribution

<table>
<thead>
<tr>
<th>Subtype (n)</th>
<th>Malaysia</th>
<th>Philippines</th>
<th>Singapore</th>
<th>Thailand</th>
<th>TOTAL (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oligo, per</td>
<td>26</td>
<td>6</td>
<td>63</td>
<td>34</td>
<td>129</td>
</tr>
<tr>
<td>Oligo, ext</td>
<td>10</td>
<td>0</td>
<td>11</td>
<td>12</td>
<td>33</td>
</tr>
<tr>
<td>Poly, RF+</td>
<td>22</td>
<td>8</td>
<td>15</td>
<td>34</td>
<td>79</td>
</tr>
<tr>
<td>Poly, RF-</td>
<td>74</td>
<td>59</td>
<td>34</td>
<td>62</td>
<td>229</td>
</tr>
<tr>
<td>ERA</td>
<td>15</td>
<td>17</td>
<td>80</td>
<td>65</td>
<td>177</td>
</tr>
<tr>
<td>PsA</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>3</td>
<td>12</td>
</tr>
<tr>
<td>SoJIA</td>
<td>82</td>
<td>33</td>
<td>24</td>
<td>107</td>
<td>246</td>
</tr>
<tr>
<td>Undiff</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL (n)</td>
<td>231</td>
<td>128</td>
<td>233</td>
<td>317</td>
<td>909</td>
</tr>
</tbody>
</table>

JIA and biologics

<table>
<thead>
<tr>
<th>Country</th>
<th>% Biologics use</th>
<th>Top subtypes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>10.0</td>
<td>SoJIA 87%, pJIA 9%, Oligo ext 4%</td>
</tr>
<tr>
<td>Philippines</td>
<td>1.6</td>
<td>SoJIA 100%</td>
</tr>
<tr>
<td>Singapore</td>
<td>50.2</td>
<td>Poly RF-53%, ERA 47%</td>
</tr>
<tr>
<td>Thailand</td>
<td>14.5</td>
<td>SoJIA 41%, ERA 41%, pJIA RF+ 15%, RF-3%</td>
</tr>
</tbody>
</table>

AsPREN: Lupus related diseases

AsPREN: Other CTD

AsPREN: Vasculitides

Conclusion 1

- Non-rheumatic conditions contributed ~40% of Singapore PR clinic population but only 10-20% of other AsPREN countries
- Accessibility
  - Financial burden
  - Number of pediatric rheumatologists
  - Level of education of both physician and public
  - Level of awareness
- Most common rheumatic disease seen by AsPREN countries are different.
  - SSc or LS – uncommon
  - JDM not as uncommon as expected, more skin and calcinosis later on
  - Vasculitis: HSP (SG: more severe?, CNS vasculitis)
Conclusion 2

- JIA distribution
  - SJIA – Thailand and Malaysia (1/3), Japan (1/2), ?? China
  - ERA – Singapore (80% HLA B27+) – further serotyping of the gene - ??predicting of axial involvement, etc.
  - Poly JIA RF- : Philippines and Kuwait (1/2)
  - Oligo JIA – Taiwan and Israel (1/2)
- JIA – associated uveitis
  - Rare – 2 - 3% (West 15 – 20%)
  - Parallel the prevalence of ANA positivity (25% vs. 30-50% West)

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AsPREN: Fellowship Training

- Local Training
  - Different disease manifestation, distribution, response to therapy and outcome
  - Local problems – cultures and belief
- Singapore as the hub, Why
  - English is the official language
  - Offer similar disease phenotypes and distribution for the region
  - More than enough materials
  - Problem: TOEFL, housing need international funding support
    - Poor neighbor countries

AsPREN: Fellowship Training

- The Trainers
  - 3 American Board certified Pediatric Rheumatologists
  - 2 Clinicians
    - Tash Arkachaisri, MD and Lena Das, MD
  - 1 Translational Scientist
    - Salvatore Albani, MD, PhD
      - Director – SingHealth Translational Immunology and Inflammation Centre
  - 2 Rheumatology Nurses
  - Full staffs – MSW, PT/OT
Acknowledgement

- National Arthritis Foundation of Singapore (NAF)
- ILAR 2011
- Asia-Pacific Pediatric Rheumatology Research and Education Network

- Singapore
  - Raffles Hospital, National University Hospital of Singapore
  - Singapore University Hospital
  - National University of Singapore
  - Singapore General Hospital
  - Khoo Teck Puat Hospital
  - National University of Singapore
  - Singapore National University Hospital
  - Singapore General Hospital
  - National University of Singapore
  - Singapore General Hospital

- Philippines
  - Children's Medical City, Manila
  - St. Mary's Hospital, Manila
  - Philippine Children's Medical Center
  - Makati Medical Center
  - Manila Doctors' Hospital
  - Manila East Hospital
  - Manila Doctors' Hospital
  - Manila East Hospital

- Thailand
  - Ramathibodi Hospital, Mahidol University
  - Queen Sirikit Children's Hospital
  - Siriraj Hospital, Mahidol University
  - Siriraj Hospital, Mahidol University
  - Siriraj Hospital, Mahidol University
  - Siriraj Hospital, Mahidol University

References