Can we put SARS aside?
Study of the long term psychiatric morbidities among SARS survivors

Mak IWC1, Pan PC1, Yiu GC1, Chan VL2, Chu CM2
1Department of Psychiatry and 2Department of Medicine & Geriatrics, United Christian Hospital

Dr Ivan W.C.Mak
Psychiatric Department
United Christian Hospital
Why important to review long term psychiatric morbidities of SARS survivors?

1) **Global** importance
   - 30 countries
   - > 8,000 reported cases
   - 744 deaths worldwide
WHO statistics about SARS cases, 2003

- China: 5000+ SARS cases
- Hong Kong: 1000 SARS cases
- Taiwan: 50 SARS cases
- Canada: 10 SARS cases
- Singapore: 10 SARS cases

Legend:
- SARS cases
- Death due to SARS
2) Previous literature for infectious disease: not stress on psychosocial impact

3) Future risk of biological disaster
   Avian influenza
   Reoccurrence of SARS
   Biological terrorist attack

4) A/v literature on SARS mainly involve short term psy. Cx.
Methodology used in previous research

- Survey
- **Acute** phase: self–administered questionnaire (Chua Can J Psychiatry 2004)
- Retrospective nature: difficult to design and launch a prospective study quickly enough to match the rapid course of the epidemic (Lee DT, CID 2004; Sheng et al 2004)
- Small sample size
- Low response rate (too many different studies; difficulty in participation in quarantine period, self administration)
- Not evaluated by a standardized research interview (Lee DT CID 2004)
- Sampling problem
Research questions and aims

1) Pattern and prevalence of long term psychiatric complications

2) Risk factors for current post-traumatic stress disorder (PTSD) 30 months post-SARS (SPP-P5.81)
Methodology

- Medical and psychiatric department
- Try to include all SARS pt treated and FU in UCH (from a list produced during SARS infection period)
Timeline of major events of SARS epidemic in HK and schedule of this study

- Mar 03: SARS outbreak, acute medical data collected
- Jun: AVN screening
- Sep: One-off assessment of subjects 30 months post-SARS
Outcome assessment

- Primary outcome: Structured Clinical Interview for DSM-IV (SCID)
Sample recruitment

93 patients

90 agreed
2 refused to join
1 returned to home country

Response rate 96.8%
## Sociodemographic background

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean and sd)</td>
<td>41.1</td>
<td>12.1</td>
</tr>
<tr>
<td>Gender (female)</td>
<td>56</td>
<td>62.2%</td>
</tr>
<tr>
<td>Education (secondary)</td>
<td>72</td>
<td>80%</td>
</tr>
<tr>
<td>HCW</td>
<td>27</td>
<td>30%</td>
</tr>
<tr>
<td>Amoy Garden Residents</td>
<td>35</td>
<td>38.9%</td>
</tr>
</tbody>
</table>
Other background

- No statistical significant difference compared with HK SARS survivors population (N=1394)
  1. mean age
  2. gender distribution
  3. proportion of HCW
Medical and psychiatric background

- Pre-SARS depressive disorder (5.6%)
  - recovered for >1 yr
- Pre-SARS alcoholic disorder (1.1%)
  - abstained for >30 yrs
- Pre-SARS trauma (DSM-IV): only 1.1%
## Medical parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospitalization</td>
<td>27 days</td>
<td>19-112</td>
</tr>
<tr>
<td>Desaturation</td>
<td>29</td>
<td>32.2%</td>
</tr>
<tr>
<td>Intubation</td>
<td>5</td>
<td>5.6</td>
</tr>
<tr>
<td>Steroid</td>
<td>4.36</td>
<td>+ 0.21</td>
</tr>
<tr>
<td>AVN</td>
<td>24</td>
<td>26.7%</td>
</tr>
<tr>
<td>Permanent lung damage</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Hospitalization: median 27 days
Desaturation 29 (32.2%)
Intubation 9 (10%)
Steroid: 4.36gm ± 0.21 (mean ± sd)
Avascular necrosis: 24 (26.7%)
## Psychiatric morbidity

<table>
<thead>
<tr>
<th>Axis I dx</th>
<th>Current dx</th>
<th>Recovered</th>
<th>Post-SARS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PTSD</td>
<td>25.6%</td>
<td>22.2%</td>
<td>47.8%</td>
</tr>
<tr>
<td>Depression</td>
<td>15.5%</td>
<td>31%</td>
<td>46.6%</td>
</tr>
<tr>
<td>Panic</td>
<td>7.8%</td>
<td>5.6%</td>
<td>13.4%</td>
</tr>
<tr>
<td>Agoraphobia</td>
<td>3.3%</td>
<td>3.3%</td>
<td>6.6%</td>
</tr>
<tr>
<td>Social phobia</td>
<td>1.1%</td>
<td>0%</td>
<td>1.1%</td>
</tr>
<tr>
<td>GAD</td>
<td>3.3%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
Discussion on the general pattern of psychiatric outcome

- Cumulative incidence at 30 months post-SARS: 58.9%
- Much higher than the usual rate for fire or natural disasters (<20%)
- SARS outbreak in 2003 not simply a medical event
Current prevalence

PTSD

9

5

3

4

5

1

other anxiety disorders

depressive disorders
Comorbidity

- Comorbidity is very common
- Chronic course associated with comorbidity
Compare with studies in acute stage

- PTSD is still prominent c.f. depressive disorder
  1. Some PTSD may have a delayed onset
  2. Constellation of PTSD may be more persistent
  3. Depressive disorder dx in the acute phase may be just adjustment disorder
Implication
1. Long term mx of SARS survivors

- Don’t just focus on biological tx
- Psychiatric or psychological consequences became important
- Beware of stigmatization – 1/3 never received proper services
- Knowledge of mx of other disasters can be applied
2. Future novel outbreak

- Target to the mind
- Medical advances $\rightarrow$ decrease mortality
Future outbreak

- Enhance preparedness
  - risk communication
  - outbreak contingency plan
  - mental health training/manpower forecast
- Early intervention
  - psychological / pharmacological
- Future study (don’t wait till the outbreak occur) – multicentre
Conclusion

- The SARS outbreak can be regarded as a health catastrophe
- SARS can create long-term psychiatric outcome comparable to other disasters
Can we put SARS aside?

- SARS is threat in the past
- SARS is still a learning experience for today and for future
What is SARS?
Acknowledgement

- UCH medical and psychiatric OPD
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- Prof Y.K. Wing
- Dr S.F. Hung
- Dr H.T. Pang
Acknowledgement

- Who are my teachers?
- The SARS patients
DEDICATED TO THOSE WHO FELL
AND TO THOSE WHO CARRY ON.

Thank You!