Global Burden of Neuropsychiatric Disorders

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Presentation and Diagnosis of Dementia

Classical symptoms may be difficult to diagnose in early stages:
- cognitive impairment, dementia
- motor slowing, impaired movement
- instability, falls, gait disturbance
- sensory impairment (visual, auditory)

Dementia is a progressive and largely irreversible syndrome that is characterised by a widespread impairment of mental function:
- many different types of dementia
- can be due to primary brain disorders, vascular disease, nutritional deficiency, and systemic disorders
- diagnosis important to exclude treatable causes of symptoms
# Global Prevalence of Neurodegenerative Diseases

<table>
<thead>
<tr>
<th>Disease</th>
<th>Numbers per million</th>
<th>Overall %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alzheimer’s Disease</td>
<td>1 in 300 *</td>
<td>3,300</td>
</tr>
<tr>
<td>Parkinson’s Disease</td>
<td>1 in 5,000</td>
<td>200</td>
</tr>
<tr>
<td>Lewy Body Disease</td>
<td>6 in 100,000</td>
<td>60</td>
</tr>
<tr>
<td>Fronto-Temporal Dementia</td>
<td>3 in 100,000</td>
<td>30</td>
</tr>
<tr>
<td>ALS</td>
<td>2 in 100,000</td>
<td>20</td>
</tr>
<tr>
<td>Huntingdon’s Disease</td>
<td>6 in 1,000,000</td>
<td>6</td>
</tr>
</tbody>
</table>

* 1-2% of the population > 65 yrs
Prevalence of Dementia – an Increasing Problem

- estimated that there are 46.8 million people with dementia worldwide
- 58% of patients live in medium and low income countries
- incidence anticipated to double every 20 years

Projected growth in people with dementia according to level of income (countries)

The Natural History of Alzheimer’s Disease Pathology
Increased Prevalence with Age

Alois Alzheimer
(1864-1915)
World Population Projections, Impact of Age

- Global population 7.2 billion in 2013, estimated growth to between 8.3 to 10.9 billion by 2050
- Increasing mean age of the population in developed and developing countries
- Global increase in aging population estimated to be 2 billion by 2050
- Mental illness significant contribution to burden of disease in patients >60 yrs age

Percentage of population aged 60 yrs and older

Disease Burden - Impact of Age and Income Status

Leading contributors to burden of disease among people aged 60 years and over - DALYs (per 1000 population) among people aged 60 and over, by cause and income region.
Impact of Dementia on Society

- impact on individuals and family (quality of life, ADLs, supervision)
- direct and indirect costs to society

- estimated total costs US$818 billion (1.09% global GDP) in 2015
- estimated cost per patient ranges from $6,700 to $43,600 per year
- projection of costs estimated to be over $2 trillion by 2030
Initiatives to Address Global Dementia Problem

- G7 Global Action against Dementia
- WHO Ministerial Conference on Global Action against Dementia
- IAEA initiatives in diagnosis and management
- Alzheimer’s disease organisations

- global priority areas identified
- new diagnostic techniques being developed
- new treatments being identified and evaluated in clinical trials
Summary

The global impact of dementia

Around the world, there will be 9.9 million new cases of dementia in 2015, one every 3 seconds.

46.8 million people worldwide are living with dementia in 2015. This number will almost double every 20 years.

68% 2050

Much of the increase will take place in low and middle income countries (LMICs); in 2015, 58% of all people with dementia live in LMICs, rising to 63% in 2030 and 68% in 2050.

638 billion
800 billion
500 billion

The total estimated worldwide cost of dementia in 2015 is US$ 818 billion. By 2018, dementia will become a trillion dollar disease, rising to US$ 2 trillion by 2030.

1 Trillion

If global dementia care were a country, it would be the 18th largest economy in the world exceeding the market values of companies such as Apple and Google.

Apple $800 billion

Google $638 billion

Facebook $500 billion

This map shows the estimated number of people living with dementia in each world region in 2015.

Europe 10.5 million
Americas 9.4 million
Asia 22.9 million
Africa 4.0 million