Validation of the Female Sexual Function Index in southern India

Female sexual disorders (FSD) are a complex set of conditions associated with multiple biological, medical and psychological risk factors. These disorders have a high prevalence, affecting 20%–50% of women. However, they are often not recognized, diagnosed and managed. There are limited data, using the Female Sexual Function Index (FSFI), on FSD in the Indian subcontinent; but they show very high rates of prevalence (73%).

We invited the relatives and friends of patients visiting the department of obstetrics and gynaecology in the Christian Medical College, Vellore, Tamil Nadu, to participate in the study. We included married women between 20 and 55 years of age, and who had been living with their husbands for at least 6 months prior to the interview. We excluded women who had genital malignancies and those who had had abdominal or genital surgery in the past year. We used the FSFI, a clinical interview employing the Diagnostic and Statistical Manual-IV (DSM-IV) criteria for FSD, and a proforma to collect sociodemographic and clinical details.

One hundred and fifty women consented to participate in the study. The majority of the participants were young (mean [SD] age 32.8 [7.3] years), homemakers (n = 111; 74%), had more than 10 years of schooling (n = 77; 51.3%), were pre-menopausal (n = 139; 93.7%) and used contraception (n = 97; 64.7%). Two-thirds of the women did not report any sexual disorder using the DSM-IV standard. The common disorders were orgasmic dysfunction (18%), hypoactive desire (16.7%) and arousal disorders (14.7%). Twenty-one (42.9%) of those with sexual disorders reported a single disorder; while 15 (30.6%) satisfied two conditions.

We compared the FSFI scores against the gold standard of DSM-IV diagnosis of sexual disorders using a receiver operating characteristic (ROC) curve. The domain scores for hypoactive desire (area under the curve [AUC] 0.64; sensitivity 68%; specificity 46%), arousal (AUC 0.62; sensitivity 77%; specificity 41%), and orgasmic disorder (AUC 0.67; sensitivity 59%; specificity 58%) performed poorly against the corresponding DSM-IV standards. Similarly, the total FSFI score (AUC 0.62; sensitivity 66%; specificity 58%) performed poorly against any DSM-IV category and against the presence of two or more DSM-IV categories (AUC 0.67; sensitivity 77%; specificity 56%). Only the domain of dyspareunia did reasonably well (AUC 0.80; sensitivity 91%; specificity 69%).

The FSFI, a screening instrument, yields high prevalence rates when used to diagnose sexual dysfunction. Sexual satisfaction and dysfunction are complex and need to be evaluated within the context of the individual, her sexual and marital relationships, and cultural factors. Dysfunctions per se, in the absence of significant personal and interpersonal distress, cannot be assumed to be disorders and diseases. The FSFI fails to elicit these dimensions and hence, cannot be used to recognize sexual disorders. In addition, sexual dysfunctions can be discrete and isolated, involving one or just a few domains. This makes it difficult to use a single total score to screen for several and diverse sexual disorders. A clinical interview using DSM-IV diagnostic criteria, on the other hand, requires a history of not just the specific dysfunction but also its impact on personal and interpersonal functioning. Making a diagnosis of the disorder according to the DSM-IV categories requires the presence of significant resultant personal and interpersonal distress, as well as the exclusion of other medical and psychiatric causes. Consequently, the DSM-IV criteria are the gold standard for diagnosis even across regions and cultures in which sexual mores may differ markedly.

Using DSM-IV standards, we found sexual disorders to be prevalent among about one-third of married women who were attending a tertiary hospital and who were not patients. This is in stark contrast to the very high figures reported with the use of the FSFI, using western thresholds. This is probably the first study to attempt to validate the FSFI in an Indian population. There is a need to replicate the study in other populations and in the community. The levels of FSD suggest that there is a need to routinely assess women attending hospitals to recognize and manage FSD. However, this will require time, clinical skill and cultural sensitivity.

REFERENCES
7 Varghese KM, Bansal R, Kekre AN, Jacob KS. Sexual dysfunction among young married women in southern India. Int Urogynecol J 2012 Apr 25. [Epub ahead of print].

Karuna Mary Varghese
Ramandeep Bansal
Aruna Nithin Kekre
Department of Obstetrics and Gynaecology
K.S. Jacob
Department of Psychiatry
Christian Medical College
Vellore
Tamil Nadu
ksjacob@cmcvellore.ac.in

Leprosy elimination: Battle won, but the war remains

The leprosy control programme started in India in 1955. Over the years it has taken many names and used varied strategies. The prevalence rate has come down from 5.76 per 10,000 population in 1982 to 0.95 on 31 December 2005, when the target of elimination was achieved at the national level.1 Till the end of March 2001, only...
two states had a prevalence of more than one and at the national level the prevalence rate was 0.69 per 10 000 population. This is a tremendous achievement.

Among all the strategies to completely eliminate leprosy, two are most important: (i) preventing disability in persons with leprosy and rehabilitating those who have already developed disabilities, and (ii) activities aimed at reducing ‘stigma’ attached with the disease. Both these strategies are interlinked. If we can prevent the deformities a person with leprosy suffers, we can go a long way in removing the stigma attached with the disease.

Deformities can be prevented if we can detect and treat patients early. In India, in 2012–13, a total of 127 000 new cases of leprosy were detected. Of these, 3865 cases had visible (grade II) disability at the time of diagnosis. Some of the grade II disabilities can be corrected by reconstructive surgery (RCS). Against a plan of 4000 RCS per year, only 2548 were done at 92 centres in 2011–12. More centres need to be enrolled for RCS to clear the backlog. Another issue is quality control at the centres doing RCS.

The other reasons for the stigma attached to leprosy are misunderstanding the disease (believing it to be a ‘divine curse’, punishment of past sins, etc.), and a negative attitude and perceived fear of infection and blame. People must be made aware of the cause of the disease and its mode of spread to dispel the myths and improve the attitude towards people with the disease. This should be done by adopting all possible tools of spreading information, education and communication (IEC).

We have won an important battle in leprosy control by bringing the prevalence rate below one, but the real war of getting rid of the ‘stigma’ attached to the disease is still to be won.

REFERENCE


Satyajit Pattnaik
Department of Community Medicine
Kalinga Institute of Medical Sciences (KIMS) KIT University, Patia
Bhubaneswar
Odisha
drsatyajitpattnaik@gmail.com

Pyrethroid ingestion-induced status epilepticus in a young woman

Pyrethroids are synthetic analogues of natural abstracts of flowers. They are widely used as insecticides both at home and commercially, and in medicine for the topical treatment of scabies and head lice. They are also present in mosquito repellents. Their desirable features are relatively low mammalian toxicity, stability in outdoor environments and quick action. The main effects of pyrethroids are on the sodium and chloride channels. Therefore, excitable (nerve and muscle) cells are the main targets of pyrethroid toxicity, which is manifested as a disordered function rather than structural damage.

Toxicity by inhalation and dermal absorption is low. Sensitization sometimes occurs in individuals after a single exposure which causes either an asthmatic condition or a skin rash or inflammation. Dizziness, headache and fatigue are common, whereas palpitations, chest tightness and blurred vision are less frequent. Coma and convulsions are the principal life-threatening features. A 16-year-old previously healthy girl presented to our emergency ward with multiple seizures and unconsciousness about 3½ hours after ingestion of a mosquito repellent liquid. There was no history of trauma or fever before the onset of seizures.

On admission, she was comatose and having generalized tonic–clonic seizures. Her blood pressure was 130/70 mmHg, but her pulse rate was 140/minute and she had a respiratory rate of 36/minute. The oxygen saturation was 86%. Her pupils were equal and reacting to light. She was immediately given a bolus of lorazepam and intravenous phenytoin in addition to mannitol, steroids and antibiotics. Bilateral rhonchi were audible on auscultation, and she was nebulized. Her seizures were controlled and she regained consciousness within 6 hours. Her other biochemical parameters were normal except for leucocytosis which normalized by day 4.

The electrocardiogram showed sinus tachycardia while the chest X-ray, abdominal ultrasound and magnetic resonance imaging of the brain were normal. She improved with treatment and was discharged on day 6 in a stable condition.

Poisoning due to pyrethroids from occupational, accidental and intentional exposure is a public health problem in the developing world. Pyrethroids are ion channel toxins prolonging neuronal excitation, but are not directly cytotoxic. Two poisoning syndromes are seen with pyrethroids. Type I pyrethroids produce reflex hyperexcitability and fine tremor whereas type II pyrethroids produce salivation, hyperexcitability, choreoathetosis and seizures. Both produce potent sympathetic activation.

Our patient presented with status epilepticus and bronchospasm following deliberate ingestion of pyrethroid few hours before admission. The exact amount of toxin consumed could not be ascertained. Systemic effects occur 4–48 hours after exposure. Seizures are a known manifestation of pyrethroid poisoning. A similar observation has been reported earlier. Cardiototoxicity due to pyrethroid causing conduction disturbance has also been reported. Treatment is symptomatic because there is no antidote for pyrethrin and pyrethroid poisoning, although pyrethroids (ion channel toxins prolonging neuronal excitation) have the reputation of being mildly toxic there is a risk of seizure on ingestion.

REFERENCES


Shubha Laxmi Margekar
Neelima Singh
Venu Gopal Margekar
Sushma Trikha
Room No. 41, Senior Girls Hostel Near Kamla Raja Hospital J.A. Hospital Campus Gwalior

Shubha Laxmi Margekar
dr_shubhalaxmi@rediffmail.com
Are Sustainable Development Goals a replacement for the Millennium Development Goals post-2015?

Over a decade after the Millennium summit, where the United Nations came up with the Millennium Development Goals (MDGs), there has been major progress towards achieving these goals as is evident from The Millennium Development Goals report 2012.1 Three years before the deadline of 2015, the worldwide proportion of people without access to improved sources of water has been reduced to half of that in 1990. The world is on track to achieve targets such as halving the poverty rate, halting and reversing the spread of tuberculosis and achieving gender parity in primary school enrolment by the 2015 deadline.1 Despite these notable achievements, humanity still faces not only one but many overlapping crises of environmental sustainability, including climate change, massive environmental pollution, acidification of the oceans, loss of biodiversity caused by unsustainable demands on forests and depletion of key fossil resources including energy (oil, gas, coal) and groundwater.2 Hunger continues to be a major issue with around one billion people who are already chronically hungry, mainly in Africa and south Asia.3 Non-communicable diseases, which have fast emerged as the major cause of morbidity and mortality, surprisingly, did not find a place in the MDGs. Unfortunately, the current MDG framework could not fully address these emerging and urgent issues. This is because MDGs were targets mainly for poor countries, to which rich countries were to add their solidarity and assistance through finances and technology.3 The fact that many issues concerning developed nations were totally overlooked is often mentioned as a major shortcoming of the MDGs. The other criticisms being the lack of intermediate objectives and milestones during the 15-year timeline, absence of real-time data collection procedure for tracking progress, the role of the private sector not being well-defined and the donor-driven nature of financing.1

With this background, the world’s heads of state and government met on 20–22 June 2012 in Rio de Janeiro, Brazil—20 years after the historic Earth Summit (1992) was held in the same place—for the Rio +20 Conference on sustainable development.4 The 1992 conference adopted an ambitious programme of action on sustainable development, known as Agenda 21, which has not yet been fully implemented due to substantial gaps. As an initiative to reaffirm and rejuvenate the goal of achieving sustainable development, the Rio +20 Conference proposed the formulation of Sustainable Development Goals (SDGs).4 Sustainable development means ‘Development that meets the needs of the present without compromising the ability of future generations to meet their own needs’.3

Sustainable development embraces the so-called triple bottom line approach to human well-being with a combination of (i) economic development, (ii) environmental sustainability, and (iii) social inclusion.

Unlike the MDGs, the SDGs will enunciate goals and challenges for all countries to strive together for the global well-being of the present generation and those to come. In this context, good health is a prerequisite for development of capabilities necessary for people to meet their full potential, and public health and sustainable development are linked by interactions between the physical environment (e.g. air pollution, chemical exposures and climate change) and the social environment. The value of health is not only intrinsic (in its own right), but also contributes to social and economic development.6

Hence, it should be understood that SDGs are not an alternative to the past or ongoing frameworks, including MDGs, but can learn from the shortcomings and challenges facing MDGs, and broaden their goals to reflect other sustainable development objectives. Integrating the SDGs, MDGs and other initiatives into a single unified process would be highly advantageous as this would set out a clear post-2015 framework for global development.

---

**Knowledge, attitude and practice towards infection control among healthcare professionals**

The reduction in rates of healthcare-associated infections (HAIs) that occurred after educational programmes on strategies to prevent infection provide indirect evidence for the value of knowledge.1,2 Most HAIs are caused by pathogens transmitted from one patient to another by healthcare workers (HCWs), who fail to adhere to simple infection control practices.1

We assessed the existing level of knowledge, attitude and practice (KAP) towards infection control among resident doctors and nurses of a tertiary care hospital using a questionnaire. The selection of interventions or strategies to prevent HAIs were based on evidence-based guidelines issued by the Centers for Disease Control and Prevention, USA.4,5 The selected preventive interventions and questionnaire were presented to a panel of three experts for face and content validation. The questionnaire had three components of 10 questions each. The minimum and maximum points that could be obtained in the KAP questionnaire were 0 and 30. The statistical significance between the mean scores of doctors and nurses was assessed by Student t-test.

We had 46 completed questionnaires from resident doctors (n=24) and nurses (n=22) of the Department of Paediatrics, All India Institute of Medical Sciences, New Delhi. The mean total score among doctors and nurses was not significantly different (p=0.4, Table I). However, doctors had significantly higher scores than nurses in knowledge and attitude components, whereas nurses scored higher in practice component.

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (SD) scores; 95% confidence intervals</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>6.8 (1.2); 6.3–7.3</td>
<td>4.8 (1.8); 4–5.6</td>
</tr>
<tr>
<td>Attitude</td>
<td>8.5 (1.1); 8–9</td>
<td>7.72 (1.35); 7.1–8.3</td>
</tr>
<tr>
<td>Practice</td>
<td>6.1 (1.33); 5.6–6.7</td>
<td>8.36 (0.74); 8–8.7</td>
</tr>
<tr>
<td>Total</td>
<td>21.47 (2.3); 20.5–22.5</td>
<td>20.9 (2.75); 19.7–22.1</td>
</tr>
</tbody>
</table>

---

**REFERENCES**


Archana R.
Sitanshu Sekhar Kar
Department of Preventive and Social Medicine
Jawaharlal Institute of Postgraduate Medical Education and Research
Puducherry
dr siti@sinu.com
significantly higher in the practice component of the questionnaire (Table 1).

Our findings show that there was a significant difference among the KAP scores of resident doctors and nurses. Suchitra and Lakshmi Devi\(^ {10} \) also found that in spite of an educational programme and significant increase in the KAP scores, the compliance to infection control practices was poorest among doctors, when compared to ward aides and nurses. This could be due to high workload,\(^ {10} \) lack of institutional guidelines, knowledge, role models or rewards.\(^ {9} \) The education of HCWs on infection control has shown a positive impact both in terms of knowledge attained\(^ {9} \) as well as in reduction of burden of HAIs.\(^ {2} \) The impact of education on the prevention of HAIs is multifactorial, i.e., by increasing overall level of knowledge, sensitizing the HCWs and thereby increasing compliance with the conduct of safe practices. For educational interventions to be more effective, we suggest that the undergraduate curriculum should place more emphasis on HAIs and their prevention. Also, effective training programmes during the early part of postgraduation should be in place so that the knowledge attained previously can be reinforced to reduce the burden of HAIs.

REFERENCES


Camphor poisoning in a child

A 2-year-old girl was brought to our hospital with a history of accidental ingestion of half a tablet of camphor being used by the family for worship. Within half an hour of consuming the tablet, she had a generalized tonic–clonic convolution with loss of consciousness for one minute. She vomited once after the convolution. Examination revealed normal vital signs without any neurological deficits. Routine haematological investigations, blood glucose, blood urea, serum creatinine, serum electrolytes, aspartate aminotransferase (AST), alanine aminotransferase (ALT) and creatinine phosphokinase-MB (CPK-MB) were within normal values. On symptomatic management, the girl recovered completely within 24 hours and was discharged after 2 days. One year later, she remains asymptomatic.

Oral ingestion of camphor is unusual due to its unpleasant taste and texture. However, ingestion, even in a small quantity, especially by children, can produce serious toxicity or even death.\(^ {1} \) Camphor is frequently used for religious purposes in India, but its potential as a toxin is not well known as there is lack of data.\(^ {1,2} \) Following the ingestion of camphor, patients usually present with nausea, vomiting, lethargy, ataxia and convulsions. Generalized tonic–clonic seizures are common after ingestion of camphor (>50 mg/kg body weight), usually occurring 5–90 minutes after exposure.\(^ {1,2} \) Seizures have been reported after ingestion, inhalation and dermal exposure to camphor.\(^ {3} \) Our patient had ingested >50 mg/kg of camphor and had a seizure within half an hour. Children are particularly vulnerable to toxicity because camphor is highly lipophilic and is easily absorbed through the skin and mucous membranes.\(^ {1} \) In children, the ingestion of as little as 500 mg of camphor may prove fatal. More commonly, ingestion of 750–1000 mg is associated with seizures and death.\(^ {1} \) Death is usually the result of respiratory failure or convulsions. Camphor toxicity may also lead to hepatic and renal damage. However, our patient had normal renal and hepatic function.

The induction of emesis, gastric lavage or the use of activated charcoal have no role in the management of camphor poisoning.\(^ {4} \) Benzodiazepine is used to control convulsions and patients who remain asymptomatic after 4 hours can be safely observed at home.\(^ {4} \) The use of camphor for treating fever in children may produce a seizure. This may be wrongly diagnosed as a simple febrile seizure rather than toxicity from camphor exposure.\(^ {3} \) In India, camphor is available in many households, as it is used for religious purposes. Each tablet contains a few grams of camphor. It is important to create awareness of the hazards of accidentally ingesting even small amounts of camphor products. It is recommended that camphor should be kept out of reach of children.

REFERENCES


K. Jagadish Kumar
Charanraj
Manjunath V.G.
Mamatha S.
Department of Paediatrics
J.S.S. Medical College, J.S.S. University
Mysore
Karnataka
jagdishmandya@gmail.com