WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

231, de Saram Place, Colombo 01000, Sri Lanka
Tele: + 94 11 2695112, Fax: +94 11 2696583, E mail: epidunit@sltnet.lk
Epidemiologist: +94 11 2681548, E mail: chepid@sltnet.lk
Web: http://www.epid.gov.lk

Vol. 41 No. 48 22nd – 28th November 2014

WER SRI LANKA - 2014

Epilepsy (Part I)

This is the first of the series of three articles on Epilepsy

Background

Epilepsy is defined as a brain disorder characterized by an enduring predisposition to generate epileptic seizures and by the neurobiologic, cognitive, psychological and social consequences of this condition.

Modern investigation of the aetiology of epilepsy began with the work of Fritsch, Hitzig, Ferrier, and Caton in the 1870s. These researchers recorded and evoked epileptic seizures in the cerebral cortex of animals. In 1929, Berger discovered that electrical brain signals could be recorded from the human head by using scalp electrodes; this discovery led to the use of electroencephalography (EEG) to study and classify epileptic seizures.

Gibbs, Lennox, Penfield, and Jasper further advanced the understanding of epilepsy and developed the system of the 2 major classes of epileptic seizures currently used: localization-related syndromes and generalized-onset syndromes. An excellent historical review of seizures and epilepsy, written by E. Goldensohn, was published in the journal Epilepsia to commemorate the 50th anniversary of the creation of the American Epilepsy Society in 1997. A decade later, another review in Epilepsia discussed the foundation of this professional society.

In a substantial number of cases, the cause of epilepsy remains unknown. Identified causes which tend to vary with patient age. Inherited syndromes, congenital brain malformations, infection, and head trauma are leading causes in children. Head trauma is the most common known cause in young adults. Strokes, tumors, and head trauma become more frequent in middle age, with stroke becoming the most common cause in the elderly, along with Alzheimer disease and other degenerative conditions.

The genetic contribution to seizure disorders is not completely understood, but at the present time, hundreds of genes have been shown to cause or predispose individuals to seizure disorders of various types. Seizures are frequently seen in patients who are referred to a genetics clinic. In some cases, the seizures are isolated in an otherwise normal child. In many cases, seizures are part of a syndrome that may also include intellectual disability, specific brain malformations, or a host of multiple congenital anomalies.

Epidemiology

Epilepsy is one of the most common serious neurological disorders affecting about 65 million people globally. The incidence is high in childhood. It affects 1% of the population by age 20 and 3% of the population by age 75. It is more common in males than females with the overall difference being small. Most of those with the disease (80%) are in the developing world.

Contents	*Page*

1. *Leading Article – Epilepsy– (Part-I)*	*1*
2. *Summary of selected notifiable diseases reported - (15th – 21st November 2014)*	*3*
3. *Surveillance of vaccine preventable diseases & AFP - (15th – 21st November 2014)*	*4*

Studies show a positive trend in knowledge, expectations and attitude towards epilepsy.

Human rights

People with epilepsy experience reduced access to health and life insurance, a withholding of the opportunity to obtain a driving license, and barriers to enter particular occupations, among other limitations. In many countries legislation reflects centuries of misunderstanding about epilepsy. For example:

- In both China and India, epilepsy is commonly viewed as a reason for prohibiting or annulling marriages.
- In the United Kingdom, a law forbidding people with epilepsy to marry was repealed only in 1970.
- Epilepsy is legally a valid reason for divorce in Sri Lanka.

Legislation based on internationally accepted human rights standards can prevent discrimination and rights violations, improve access to health care services and raise quality of life.

WHO response

WHO and its partners recognize that epilepsy is a major public health concern. WHO, the International League Against Epilepsy (ILAE) and the International Bureau for Epilepsy (IBE) are carrying out a global campaign, 'Out of the Shadows' to provide better information and raise awareness about epilepsy, and strengthen public and private efforts to improve care and reduce impacts of the disorder.

Projects to reduce the treatment gap and morbidity of people with epilepsy, train and educate health professionals, dispel stigma, identify potential for prevention and develop models integrating epilepsy control into local health systems are ongoing in many countries. In a project carried out in China, the treatment gap was reduced by 13% and there was improved access to care for people with epilepsy.

Epileptic Seizures Classification

In 1981, the International League Against Epilepsy (ILAE) developed an international classification of epileptic seizures that divides seizures into 2 major classes: partial-onset seizures and generalized-onset seizures. Partial-onset seizures begin in a focal area of the cerebral cortex, whereas generalized-onset seizures have an onset recorded simultaneously in both cerebral hemispheres. Some seizures are difficult to fit into a single class, and they are considered unclassified seizures. This classification is still widely accepted.

Classification of Epileptic Syndromes

In 1989, the International League Against Epilepsy (ILAE) developed a classification of epileptic syndromes, which is in the process of being revised. The current system is comprised 2 major categories: localization-related syndromes and generalized-onset syndromes

Localization-related epilepsies and syndromes include the following:

Idiopathic, with age-related onset

Benign childhood epilepsy with centrotemporal spikes

Childhood epilepsy with occipital paroxysms

Symptomatic

Mesial temporal lobe sclerosis

Generalized epilepsies and syndromes include the following:

Idiopathic, with age-related onset

Benign neonatal familial convulsions

Benign neonatal convulsions

Benign myoclonic epilepsy of infancy

Childhood absence epilepsy (pyknolepsy)

Juvenile absence epilepsy

Juvenile myoclonic epilepsy (JME)

Epilepsy with grand mal seizures on awakening

Idiopathic and/or symptomatic infantile spasms

Lennox-Gastaut syndrome

Epilepsy with myoclonic astatic seizures

Epilepsy with myoclonic absences

Symptomatic

Diagnosis

The diagnosis of seizures is based on the patient's clinical history. The clinical diagnosis can be confirmed by abnormalities on the interictal electroencephalogram (EEG). However, these abnormalities can be present in otherwise healthy individuals, and their absence does not exclude the diagnosis of epilepsy.

Sources

http://emedicine.medscape.com/article/1184846-overview
http://asn.lk/sites/default/files/Management-of-Epilepsy%282%29.pdf

 to be continued

Table 1: Selected notifiable diseases reported by Medical Officers of Health 15th – 21st Nov 2014 (47th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmaniasis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	301	12815	1	141	0	13	4	110	0	218	9	195	0	3	1	57	0	0	3	384	2	59	0	3	**81**	**19**
Gampaha	123	7305	0	132	0	11	0	36	0	31	2	407	0	23	0	248	0	5	0	263	0	66	1	3	**40**	**60**
Kalutara	39	2394	2	152	0	11	1	57	0	80	15	325	0	4	0	22	0	1	13	242	1	70	0	0	**85**	**15**
Kandy	118	1853	3	87	0	7	4	29	0	20	6	61	1	81	5	199	0	1	2	175	0	29	0	5	**100**	**0**
Matale	15	501	6	70	0	2	1	19	0	18	1	39	0	3	0	134	0	1	1	50	1	49	0	32	**85**	**15**
NuwaraEliya	5	273	2	261	0	3	0	20	0	70	2	29	0	56	1	38	0	0	2	125	0	40	0	0	**77**	**23**
Galle	14	1039	1	116	0	6	1	9	0	33	5	198	2	100	0	13	0	1	1	388	1	54	0	3	**85**	**15**
Hambantota	14	601	8	58	0	4	0	11	0	16	3	85	0	69	0	18	0	0	5	141	1	39	16	345	**100**	**0**
Matara	18	657	2	95	0	4	0	23	0	20	3	100	0	62	2	53	0	0	5	176	1	36	3	82	**100**	**0**
Jaffna	83	1314	66	841	0	7	8	263	4	71	1	12	20	314	0	14	0	0	0	131	0	53	0	1	**100**	**0**
Kilinochchi	4	68	6	123	0	3	1	28	0	0	0	1	0	20	0	0	0	0	0	15	0	6	0	11	**75**	**25**
Mannar	37	239	5	63	0	10	1	37	0	9	0	4	0	24	1	3	0	0	0	11	0	8	0	5	**80**	**20**
Vavuniya	5	121	8	88	0	1	3	65	1	26	0	9	0	6	0	5	0	0	0	12	0	17	0	5	**100**	**0**
Mullaitivu	2	102	0	72	0	0	1	14	0	26	0	8	0	12	0	0	0	2	0	5	0	5	0	7	**80**	**20**
Batticaloa	34	761	13	341	0	3	0	37	2	33	0	17	0	2	0	7	0	1	1	58	0	6	0	0	**79**	**21**
Ampara	3	150	1	79	0	1	0	3	0	18	1	19	0	13	0	5	0	0	1	118	0	9	0	12	**86**	**14**
Trincomalee	13	565	2	65	0	1	0	5	0	11	0	20	0	22	0	2	0	0	2	101	0	17	0	8	**75**	**25**
Kurunegala	75	2082	1	144	0	26	2	22	0	32	9	118	1	47	2	64	0	1	2	378	3	74	7	142	**89**	**11**
Puttalam	33	704	3	72	0	3	0	14	0	11	1	60	0	24	0	6	0	3	2	78	0	31	1	8	**69**	**31**
Anuradhapura	10	504	19	231	0	5	0	4	1	59	11	101	2	29	1	17	0	0	2	213	1	52	14	396	**79**	**21**
Polonnaruwa	20	500	8	64	0	4	0	7	1	2	5	64	0	8	1	9	0	0	3	151	0	26	0	127	**86**	**14**
Badulla	35	813	6	194	0	9	0	12	0	15	2	54	2	110	3	148	0	0	12	88	1	125	1	1	**82**	**18**
Monaragala	13	284	13	100	0	4	0	8	0	33	2	71	1	153	0	118	0	2	2	85	0	21	1	31	**100**	**0**
Ratnapura	36	2685	2	214	0	24	0	27	0	34	19	408	0	101	3	442	0	1	2	177	3	44	0	33	**89**	**11**
Kegalle	38	1558	0	98	0	10	0	50	0	34	17	264	0	58	6	250	0	0	4	243	1	72	0	2	**91**	**9**
Kalmune	80	330	4	137	0	1	0	6	1	78	0	3	0	0	0	1	0	0	1	99	1	10	0	0	**77**	**23**
SRILANKA	**1168**	**40218**	**182**	**4038**	**0**	**173**	**27**	**916**	**10**	**998**	**114**	**2672**	**29**	**1344**	**26**	**1873**	**0**	**19**	**66**	**3907**	**17**	**1018**	**44**	**1262**	**84**	**16**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 21st November , 2014 Total number of reporting units 337 Number of reporting units data provided for the current week: 288 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

15th – 21st Nov 2014 (47th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2014	Number of cases during same week in 2013	Total number of cases to date in 2014	Total number of cases to date in 2013	Difference between the number of cases to date in 2013& 2014
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	00	00	00	00	00	00	00	01	03	75	94	-20.2%
Diphtheria	00	00	00	00	00	00	00	00	00	00	-	00	-	%
Mumps	00	00	03	00	01	02	00	01	01	08	19	613	1399	-0.6%
Measles	01	01	01	01	00	06	01	00	02	13	45	2999	3692	-18.8%
Rubella	00	00	00	00	00	00	00	00	00	00	00	17	27	-37.1%
CRS**	00	00	00	00	00	00	00	00	00	00	00	04	06	-33.3%
Tetanus	00	00	00	00	00	00	00	00	00	00	01	13	23	-43.5%
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	-	00	-	%
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	22	68	-67.7%
Whooping Cough	00	00	00	01	00	00	00	00	03	04	00	75	82	-8.6%
Tuberculosis	64	14	15	13	24	51	09	12	33	235	164	8840	7516	+17.6%

Key to Table 1 & 2

Provinces: W: Western, C: Central, S: Southern, N: North, E: East, NC: North Central, NW: North Western, U: Uva, Sab: Sabaragamuwa.

RDHS Divisions: CB: Colombo, GM: Gampaha, KL: Kalutara, KD: Kandy, ML: Matale, NE: Nuwara Eliya, GL: Galle, HB: Hambantota, MT: Matara, JF: Jaffna, KN: Killinochchi, MN: Mannar, VA: Vavuniya, MU: Mullaitivu, BT: Batticaloa, AM: Ampara, TR: Trincomalee, KM: Kalmunai, KR: Kurunegala, PU: Puttalam, AP: Anuradhapura, PO: Polonnaruwa, BD: Badulla, MO: Moneragala, RP: Ratnapura, KG: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS** =Congenital Rubella Syndrome

AFP and all clinically confirmed Vaccine Preventable Diseases except Tuberculosis and Mumps should be investigated by the MOH

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them

PRINTING OF THIS PUBLICATION IS FUNDED BY THE WORLD HEALTH ORGANIZATION (WHO).

Comments and contributions for publication in the WER Sri Lanka are welcome. However, the editor reserves the right to accept or reject items for publication. All correspondence should be mailed to The Editor, WER Sri Lanka, Epidemiological Unit, P.O. Box 1567, Colombo or sent by E-mail to chepid@sltnet.lk. **Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

ON STATE SERVICE

Dr. P. PALIHAWADANA
CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10