WEEKLY EPIDEMIOLOGICAL REPORT

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Hepatitis: Know it. Confront it (Part II)

This is the second article in a series of 3 articles on Hepatitis. Preceding article described hepatitis A and E viruses. This article aims to describe Hepatitis viruses which are primarily spread through parenteral route, namely Hepatitis B, D viruses. Hepatitis C, which is also spread parenterally, will be described in the next article.

Hepatitis B

Hepatitis B is a potentially life-threatening liver infection caused by the hepatitis B virus. It is a major global health problem and the most serious type of viral hepatitis. It can cause chronic liver disease and puts people at high risk of death from cirrhosis of the liver and liver cancer.
A vaccine against hepatitis B has been available since 1982. Hepatitis B vaccine is 95% effective in preventing HBV infection and its chronic consequences, and is the first vaccine against a major human cancer.

Key facts

- Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease.
- The virus is transmitted through contact with the blood or other body fluids of an infected person - not through casual contact.
- About 2 billion people worldwide have been infected with the virus and about 350 million live with chronic infection. An estimated 600, 000 persons die each year due to the acute or chronic consequences of hepatitis B.
- About 25% of adults who become chronically infected during childhood later die from liver cancer or cirrhosis (scarring of the liver) caused by the chronic infection.
- The hepatitis B virus is 50 to 100 times more infectious than HIV.
- Hepatitis B virus is an important occupational hazard for health workers.
  Hepatitis B is preventable with a safe and effective vaccine.

Symptoms

Hepatitis B virus can cause an acute illness with symptoms that last several weeks, including yellowing of the skin and eyes (jaundice), dark urine, extreme fatigue, nausea, vomiting and abdominal pain. People can take several months to a year to recover from the symptoms. HBV can also cause a chronic liver infection that can later develop into cirrhosis of the liver or liver cancer.

Who is most at risk for chronic disease?

The likelihood that an HBV infection will become chronic depends upon the age at which a person becomes infected. Young children who become infected with HBV are most likely to develop chronic infections and about 90% of infants infected during the first year of life develop chronic infections. About 25% of children who become chronically infected during childhood die from HBV-related liver cancer or cirrhosis when they are adults.

About 90% of healthy adults who are infected with HBV will recover and be completely rid of the virus within six months.

Transmission

Hepatitis B virus is transmitted between people by contact with the blood or other body fluids (i.e. semen and vaginal fluid) of an infected person. Modes of transmission are the same for the human immunodeficiency virus (HIV) but HBV is 50 to 100 times more infectious. Unlike HIV, HBV can survive outside the body for at least 7 days. Common modes of transmission in developing countries are

- Perinatal (from mother to baby at birth)
- Early childhood infections (inapparent infection through close interpersonal contact with infected household contacts)
- Unsafe injection practices

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- Blood transfusions
- Sexual contact

Today, the majority of infections in developed countries are transmitted during young adulthood by sexual activity and injecting drug use. HBV is a major infectious occupational hazard of health workers. HBV does not spread casually in the workplace.

Treatment

There is no specific treatment for acute hepatitis B. Care is aimed at maintaining comfort and adequate nutritional balance, including replacement of fluids that are lost from vomiting and diarrhoea.

Chronic hepatitis B can be treated with drugs including interferon and anti viral agents which are effective in some patients. Treatment can be very expensive and it is not available to most patients in developing countries.

Liver cancer is almost always fatal and often develops in people at an age when they are most productive and have family responsibilities. In developing countries, most people with liver cancer die within months of diagnosis. In higher income countries, surgery and chemotherapy can prolong life for up to a few years in some patients.

Patients with cirrhosis are sometimes given liver transplants, with varying success.

Prevention

Mainstay of Hepatitis B infection prevention is hepatitis B vaccine. All the children need to be vaccinated, starting in infancy. The vaccine can be given as either three or four separate doses, as a part of existing routine immunization schedule (as being done in Sri Lanka). In areas where mother to infant spread of HBV is common, the first dose of vaccine should be given as soon as possible after birth (i.e. within 24 hours).

The complete vaccine series induces protective antibody levels in more than 95% of infants, children and young adults. Protection lasts at least 20 years and should be lifelong.

All children and adolescents younger than 18 years old and not previously vaccinated should receive the vaccine. People in high risk groups should also be vaccinated, including:

- Persons with high risk sexual behaviour
- Partners and household contacts of HBV infected persons
- Injecting drug users
- Persons who frequently require blood or blood products
- Recipients of solid organ transplantation
- Those at occupational risk of HBV infection, including health care workers
- International travelers to countries with high rates of HBV.

The vaccine has an outstanding record of safety and effectiveness. Since 1982, over one billion doses of hepatitis B vaccine have been used worldwide. Vaccination has reduced the rate of chronic infection to less than 1% among immunized children.

Hepatitis D virus (HDV) infections occur only in those who are infected with HBV. The dual infection of HDV and HBV can result in a more serious disease with a worse outcome. Safe and effective hepatitis B vaccines provide protection from HDV infection

Sources

What is hepatitis? available from
http://www.who.int/features/qa/76/en/index.html

Hepatitis B Fact sheet, available from
http://www.who.int/mediacentre/factsheets/fs204/en/index.html

Table 3 : Water Quality Surveillance
Number of microbiological water samples - July / 2011

District	MOH areas	No: Expected *	No: Received
Colombo	12	72	23
Gampaha	15	90	8
Kalutara	12	72	8
NIHS	2	12	NR
Kandy	23	138	40
Matale	12	72	4
Nuwara Eliya	13	78	0
Galle	19	114	15
Matara	17	102	12
Hambantota	12	72	20
Jaffna	11	66	21
Kilinochchi	4	24	0
Mannar	5	30	3
Vavuniya	4	24	31
Mullativu	4	24	NR
Batticaloa	14	84	NR
Ampara	7	42	NR
Trincomalee	11	66	10
Kurunegala	23	138	59
Puttlam	9	84	NR
Anuradhapura	19	114	22
Polonnaruwa	7	42	30
Badulla	15	90	37
Moneragala	11	66	47
Rathnapura	18	108	NR
Kegalle	11	66	NR
Kalmunai	13	78	3

* No of samples expected (6 / MOH area / Month)
NR = Return not received

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Table 1: Vaccine-preventable Diseases & AFP

23rd – 29th July 2011 (30th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2011	Number of cases during same week in 2010	Total number of cases to date in 2011	Total number of cases to date in 2010	Difference between the number of cases to date in 2011 & 2010
	W	C	S	N	E	NW	NC	U	Sab					
Acute Flaccid Paralysis	01	00	00	00	00	00	00	00	00	01	04	53	56	- 05.4 %
Diphtheria	00	00	00	00	00	00	00	00	00	-	-	-	-	-
Measles	03	00	00	00	00	00	00	01	00	04	02	91	59	+ 54.2 %
Tetanus	00	00	00	00	00	00	00	00	00	00	00	12	15	- 20.0 %
Whooping Cough	00	00	00	00	00	00	00	00	00	00	01	24	18	+ 33.3 %
Tuberculosis	12	17	07	01	05	11	00	00	03	56	150	5125	4982	+ 02.9 %

Table 2: Newly Introduced Notifiable Disease

23rd – 29th July 2011 (30th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2011	Number of cases during same week in 2010	Total number of cases to date in 2011	Total number of cases to date in 2010	Difference between the number of cases to date in 2011 & 2010
	W	C	S	N	E	NW	NC	U	Sab					
Chickenpox	11	03	15	04	06	07	13	03	12	74	31	2737	2080	+ 31.6 %
Meningitis	08 KL=2 GM=5 CB=1	01 ML=1	02 HB=1 MT=1	00	01 BT=1	05 KN=5	01 AP=1	00	03 KG=1 RP=2	21	16	529	1078	- 50.9 %
Mumps	07	09	20	02	33	10	04	02	13	100	17	1779	620	+ 186.9 %
Leishmaniasis	00	00	00	00	00	03 KN=3	07 AP=5 PO=2	00	00	10	07	427	173	+ 146.8 %

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.

DPDHS 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, Whooping Cough, Chickenpox, Meningitis, Mumps.

Special Surveillance: Acute Flaccid Paralysis.

Leishmaniasis is notifiable only after the General Circular No: 02/102/2008 issued on 23 September 2008. .

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

Table 4: Selected notifiable diseases reported by Medical Officers of Health

23rd – 29th July 2011 (30th Week)

DPDHS Division	Dengue Fever / DHF*		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Returns Received Timely**
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	%
Colombo	277	5822	2	132	0	6	5	88	0	47	3	271	0	6	1	37	0	2	**77**
Gampaha	122	2176	2	96	0	11	2	36	0	27	4	371	0	19	14	150	1	5	**80**
Kalutara	24	805	0	97	0	4	1	38	0	20	7	190	0	1	0	5	0	0	**67**
Kandy	30	500	1	283	1	6	0	22	0	36	3	118	5	80	2	42	0	0	**96**
Matale	13	220	9	115	0	3	0	20	0	18	1	148	1	13	0	5	0	0	**100**
Nuwara	12	124	2	279	0	3	2	36	0	89	0	34	1	51	0	15	0	1	**92**
Galle	25	481	2	59	1	6	2	9	0	6	2	109	1	28	0	8	0	5	**89**
Hambantota	5	305	1	30	0	4	0	3	1	20	4	417	2	45	0	7	0	0	**83**
Matara	12	311	4	53	0	2	0	10	14	27	2	202	1	50	0	14	0	1	**94**
Jaffna	5	197	11	142	0	3	6	183	0	64	0	2	2	188	0	19	0	1	**82**
Kilinochchi	1	39	0	12	0	3	0	7	0	12	0	2	0	8	0	3	0	0	**50**
Mannar	1	24	0	13	0	0	1	20	0	78	0	12	0	30	0	2	0	0	**100**
Vavuniya	0	62	0	24	0	10	0	8	0	39	0	38	0	2	0	1	0	0	**100**
Mullaitivu	0	15	0	36	0	1	0	3	0	8	0	5	0	1	0	2	0	0	**50**
Batticaloa	9	664	3	504	0	4	0	5	4	25	0	23	0	3	0	2	0	5	**86**
Ampara	5	97	2	79	0	1	0	8	0	28	0	54	0	1	0	7	0	0	**86**
Trincomalee	3	126	11	533	0	2	2	5	0	8	0	84	2	6	1	7	0	0	**92**
Kurunegala	38	573	6	235	1	9	4	68	0	68	7	1372	4	55	0	23	0	4	**83**
Puttalam	8	339	5	131	0	1	0	22	0	9	1	97	0	17	0	6	0	1	**67**
Anuradhapu	5	182	2	89	0	1	0	2	0	24	1	235	0	16	4	13	0	1	**68**
Polonnaruw	3	206	2	89	0	1	0	9	10	22	0	74	0	1	0	14	0	0	**100**
Badulla	24	388	5	225	0	5	1	44	0	7	1	54	2	52	0	38	0	0	**76**
Monaragala	7	154	1	62	0	4	1	22	0	10	1	169	1	50	1	42	0	0	**100**
Ratnapura	20	582	13	370	0	5	1	34	0	16	9	360	0	25	5	31	0	2	**83**
Kegalle	21	425	2	84	0	12	1	52	0	22	1	251	0	21	4	106	0	0	**91**
Kalmune	1	27	6	457	0	0	0	0	0	16	0	5	0	2	0	2	0	1	**69**
SRI LANKA	**661**	**14844**	**92**	**4229**	**03**	**107**	**29**	**754**	**29**	**746**	**47**	**4697**	**22**	**771**	**32**	**601**	**01**	**29**	**84**

Source: Weekly Returns of Communicable Diseases WRCD).
***Dengue Fever / DHF** refers to Dengue Fever / Dengue Haemorrhagic Fever.
****Timely** refers to returns received on or before 29th July , 2011 Total number of reporting units =327. Number of reporting units data provided for the current week: 275
A = Cases reported during the current week. **B** = Cumulative cases for the year.

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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.**

ON STATE SERVICE

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