WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health & Indigenous Medical Services

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

WER SRI LANKA 2020

Vol. 47 No. 36 **29th– 04th Sep 2020**

Neglected Tropical Diseases - Schistosomiasis

Schistosomiasis is a parasitic disease caused by blood flukes (trematode worms). People become infected when larva released by fresh water snails penetrate the skin. Clinical features depend on site of infestations:

- Intestinal schistosomiasis can result in abdominal pain, diarrhoea, and blood in the stool. Hepatomegaly, ascites and portal hypertension can also occur.
- Urogenital schistosomiasis causes haematuria. Fibrosis of the bladder and ureter, and kidney disease can occur in advanced cases. Bladder cancer may occur in later stages.

Furthermore, women can develop genital lesions, vaginal bleeding, pain during sexual intercourse, and nodules in the vulva. In men, urogenital schistosomiasis can affect the seminal vesicles, prostate, and other organs leading to infertility.

The disease is diagnosed via the detection of parasite eggs in stool or urine specimens. Antibodies and/or antigens detected in blood or urine samples are also tested. Treatment is with praziquantel. The control of schistosomiasis is by large-scale treatment of at-risk population groups. Access to safe water, improved sanitation, hygiene education, and snail control are also important factors

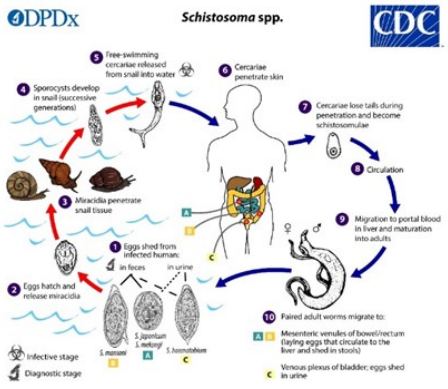

Figure: Lifecycle of *Schistosoma spp*
Source: Center for Disease Control

Soil-transmitted helminth infections

The main species causing disease in humans are the roundworm namely Ascaris lumbricoides, the whipworm such as Trichuris trichiura) and hookworms (Necator americanus and Ancylostoma duodenale). Adult worms live in the intestine produce thousands of eggs which are passed in the faeces of those infected. Eggs can contaminate food and water sources where they will be ingested. Hookworm eggs hatch in the soil and release larvae which mature into a form that can actively penetrate the skin. Infection occurs by walking barefoot on the contaminated soil.

Consequences of infectio include intestinal manifestations such as diarrhoea and abdominal pain, malnutrition, general malaise and weakness, and impaired growth and physical development. The disease can even lead to intestinal obstruction. Nutritional effects such as anemia, vitamin deficiencies and malabsorbtion are also seen.

Treatment is with anti-helminth drugs such as albendazole and mebendazole. Prevention is by breaking the chain of transmission, identifying high risk areas and mass-scale drug administration through deworming programs. Behavioural change and environment sanitation are also supplementary preventive actions.

Snake bite envenoming

About 5.4 million snake bites occur every year. It causes 1.8 to 2.7 million cases of envenomings. There are between 81 410 and 137 880 deaths each year. Three times as many amputations and other permanent disabilities occur each year.

Health systems in many countries where snake bites are common often lack the infrastructure and resources to collect robust statistical data on the problem. Under-reporting of snake bite incidence and mortality is commonly seen.

Snake enveomation occurs mostly in women, children and farmers in poor rural communities in low- and middle-income countries. The highest incidence occurs in countries where health systems are weakest and medical resources sparse

Venomous snake bites can affect in different ways depending on the type of snake. Morbidity and mortality occurs due to neurotoxicity resulting in respiratory failure, permanent renal damage, hematotoxicity and coagulopathy and due to local envenomation with necrosis.

Current available antivenom sera is used only for a limited species of snakes. The production of AVS is done only in certain number of countries.

A Snakebite Envenoming Working Group was established by the WHO. This strategy aims for a 50% reduction in mortality and disability caused by snakebite envenoming by 2030. This aim will be achieved through four key objectives:

- Empower and engage communities,
- Ensure safe, effective treatment,
- Strengthen health systems, and
- Increase partnerships, coordination and re-

Contents **Page**

sources.

Teaniasis/cystercosis

Taeniasis is an intestinal infection caused by: *Taenia solium* (pork tapeworm), *Taenia saginata* (beef tapeworm) and *Taenia asiatica*. Humans can become infected with *T. saginata* or *T. asiatica* when they consume infected beef meat or pig liver, respectively, which has not been cooked adequately but taeniasis due to these worms has no major impact on human health. Only *T. solium* causes major health problems.

Human tapeworm carriers excrete tapeworm eggs in their faeces and contaminate the environment when they defecate in open areas.

Humans can also become infected with *T. solium* eggs due to poor hygiene (via the fecal-oral route) or ingesting contaminated food or water. Ingested *T. solium* eggs develop to larvae (called cysticerci) in various organs of the human body (human cysticercosis). Human cysticercosis can result in devastating effects on human health.

Abdominal pain, nausea, diarrhoea or constipation can occur when the tapeworms grow in the intestines 2 months after ingestion of meat containing cysticerci. Infected people may develop visible or palpable nodules (beneath the skin (subcutaneous) as the larvae (cysticerci) develop in the muscles, skin, eyes and the central nervous system. When cysts develop in the brain, it is called neurocysticercosis. Symptoms include severe headache, blindness, convulsions, and epileptic seizures, and can be fatal.

T. solium is the cause of 30% of epilepsy cases in many endemic areas. In such places people and roaming pigs live in close proximity. In high risk communities it can be associated with as many as 70% of epilepsy cases. More than 80% of the world's 50 million people who are affected by epilepsy live in low and lower-middle income countries.

Cysticercosis mainly affects the health of subsistence farming communities in developing countries of Africa, Asia and Latin America. In 2015, the WHO Foodborne Disease Burden Epidemiology Reference Group identified *T. solium* as a major cause of deaths from food-borne diseases, resulting in a considerable total of 2.8 million disability-adjusted life-years (DALYs). The total number of people affected with neurocysticercosis, including symptomatic and asymptomatic cases, is estimated to be between 2.56–8.30 million, based on the range of epilepsy prevalence data available. Although 70% of patients with epilepsy could lead a normal life if treated correctly, poverty, ignorance of the disease, inadequate infrastructure in health or lack of access to medication, cause 75% people with this condition to be treated poorly, if treated at all.

Taenaisis can be treated with single doses of praziquantel or niclosamide . Albendazole at 400 g for 3 consecutive days has also been used. Neurocysterocosis may require corticosteroids. Prevention includes mass drug administration, health education and sanitation in breaking transmission cycle is important. meat inspection and treatment of pigs is also needed.

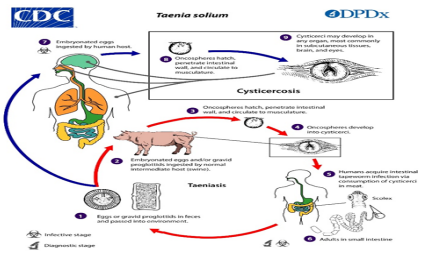

Figure: Lifecycle of *Taenia solium* Source: Center for Disease Control

Trachoma

Trachoma is caused by infection with the bacterium *Chlamydia trachomatis* usually seen among the poorest of the poor, which can cause permanent blindness. It is a public health problem in 44 countries and is responsible for the blindness or visual impairment of about 1.9 million people worldwide. Infection spreads through contact with fomites of infected persons and by flies that have been in contact with eye/nasal discharges of infected patients. Repeated infection can cause scarring of the inner eyelid (trachomatous conjunctival scarring) which causes the eyelid to turn inwards. This causes the eyelashes to rub against the eyeball (trachomatous trichiasis) which can lead to corneal scarring in the long run, the ultimate result of which will be permanent blindness. Long term it leads to scarring of the cornea and blindness.

Elimination programmes in endemic countries are being implemented using the WHO-recommended SAFE strategy. This consists of:

- Surgery to treat the blinding stage (trachomatous trichiasis);
- Antibiotics to treat the infection, particularly mass drug administration of the antibiotic azithromycin.
- Facial cleanliness
- Environmental improvement mainly improving access to water and sanitation.
- Most endemic countries have agreed to accelerate the implementation of this strategy to achieve elimination targets.

Figure: ophthalmic lesions of repeated infection with trachoma

Yaws (endemic trepanematoses)

Yaws is a chronic disfiguring and debilitating disease which affects skin, bone and cartilage. Humans are believed to be the only reservoir, and transmission is from person to person. The causative organism is *Treponema pallidum* subspecies *pertenue*. Yaws initially presents as a papilloma which will ulcerate. Papilloma and ulcers are very infectious. Secondary yaws occurs weeks to months after the primary infection and presents with multiple raised yellow lesions or dactylitis.

Diagnosis can be by laboratory-based serological tests such as Treponema pallidum particle agglutination (TPPA) and rapid plasma reagin (RPR). Treatment is with azithromycin or benzathine penicillin. Preventions is with health education and improvement in personal hygiene to reduce transmission. Contacts of patients should have empiric treatment. Mass treatment is also done.

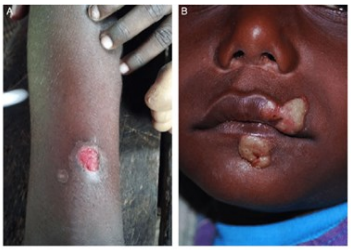

Figure:lesions caused by yaws

Compiled By

Dr. Chathurika Herath

PG Trainee in Community Medicine,
Epidemiology Unit, Ministry of Health

References:

World Health Organisation: Fact sheets on NTDs
https://www.who.int/news-room/fact-sheets/detail/schistosomiasis
https://www.who.int/news-room/fact-sheets/detail/soil-transmitted-helminth-infections
https://www.who.int/news-room/fact-sheets/detail/taeniasis-cysticercosis
https://www.who.int/news-room/fact-sheets/detail/yaws

Table 1: Selected notifiable diseases reported by Medical Officers of Health 22nd– 28th Aug 2020 (35th 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	71	3763	0	25	0	9	0	6	0	16	5	246	0	2	0	3	0	0	1	190	1	38	0	2	**56**	**100**
Gampaha	50	2308	1	11	0	6	0	7	0	19	3	192	0	5	0	6	0	1	7	238	1	27	0	50	**42**	**98**
Kalutara	23	1593	1	12	0	6	1	6	2	6	26	542	1	14	0	6	0	1	2	262	1	37	0	0	**50**	**98**
Kandy	89	2782	0	23	0	1	0	9	0	13	6	180	4	89	0	4	0	0	3	145	0	23	2	57	**64**	**100**
Matale	8	542	0	8	1	4	0	5	0	6	0	90	0	6	0	7	0	1	1	53	0	5	8	248	**63**	**100**
NuwaraEliya	2	158	1	31	0	1	1	4	0	9	2	100	1	78	0	3	0	0	1	70	0	12	0	0	**22**	**100**
Galle	9	1532	1	31	0	18	0	4	0	14	15	549	0	51	0	3	0	0	4	288	2	50	0	4	**31**	**99**
Hambantota	1	331	4	11	0	4	0	2	0	48	4	189	1	56	0	4	0	1	6	166	2	43	35	552	**69**	**100**
Matara	2	478	2	25	0	15	0	1	0	3	17	420	0	10	1	10	0	0	0	118	0	20	8	312	**17**	**100**
Jaffna	6	1990	0	77	0	0	0	20	32	59	0	20	5	506	0	0	1	2	2	99	0	10	0	2	**29**	**93**
Kilinochchi	0	125	0	37	0	2	0	11	3	17	1	19	2	34	0	1	0	0	0	12	0	11	0	13	**65**	**100**
Mannar	0	133	0	0	0	0	0	1	0	2	0	6	0	2	0	0	0	0	0	2	0	8	0	0	**39**	**100**
Vavuniya	0	248	2	13	0	0	1	6	0	3	1	41	0	2	0	0	0	0	0	29	0	4	0	1	**64**	**100**
Mullaitivu	1	82	1	10	0	0	0	6	1	3	1	21	1	11	0	3	0	2	0	10	0	5	0	6	**43**	**93**
Batticaloa	11	2317	5	74	0	4	0	1	1	48	2	29	0	0	0	5	0	1	0	84	4	28	0	1	**52**	**100**
Ampara	1	307	1	17	0	4	0	0	0	0	1	85	0	0	0	4	0	0	3	113	0	15	0	5	**68**	**100**
Trincomalee	2	2271	0	14	0	0	0	0	0	2	0	28	0	9	0	0	0	0	2	86	0	8	0	1	**45**	**91**
Kurunegala	14	862	0	21	0	11	0	3	0	36	7	179	1	27	0	5	0	3	2	292	0	30	12	352	**47**	**99**
Puttalam	7	452	0	9	0	4	0	3	0	1	2	58	0	15	0	0	0	1	1	73	6	49	0	9	**57**	**100**
Anuradhapur	2	392	0	16	0	2	0	4	0	30	3	228	1	21	0	12	0	1	2	168	3	51	5	192	**41**	**96**
Polonnaruwa	1	224	1	6	0	0	0	0	0	5	1	118	0	1	0	17	0	1	1	124	1	15	19	208	**60**	**87**
Badulla	0	433	0	16	0	5	0	3	0	4	12	298	2	83	0	13	0	0	2	132	0	32	0	18	**59**	**90**
Monaragala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Ratnapura	34	1772	4	80	1	27	0	5	1	35	31	1228	2	41	0	15	0	0	2	163	2	92	3	102	**50**	**100**
Kegalle	17	711	0	18	0	10	0	3	0	17	17	387	1	40	0	9	0	0	3	150	4	55	0	28	**54**	**100**
Kalmune	7	889	0	48	0	3	0	1	0	6	0	17	0	2	0	3	0	0	2	270	0	36	0	0	**66**	**100**
SRILANKA	**358**	**26695**	**24**	**633**	**2**	**136**	**3**	**111**	**40**	**402**	**15**	**5270**	**22**	**1105**	**1**	**133**	**1**	**15**	**47**	**3337**	**27**	**704**	**92**	**2163**	**49**	**95**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 28th Aug, 2020 Total number of reporting units 356 Number of reporting units data provided for the current week: 310 C**-Completeness

Table 2: Vaccine-Preventable Diseases & AFP

22nd– 28th Aug 2020 (35th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2020	Number of cases during same week in 2019	Total number of cases to date in 2020	Total number of cases to date in 2019	Difference between the number of cases to date in 2020 & 2019
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	01	00	00	00	00	01	01	30	54	- 44.4 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	01	00	00	00	00	00	00	01	02	123	240	- 48.7%
Measles	00	00	00	00	00	00	00	00	00	00	06	37	237	- 84.3 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	00	00	00	00	00	00	01	03	15	- 80 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	00	00	00	00	31	10	210 %
Whooping Cough	01	00	01	00	00	00	00	00	00	02	00	07	36	- 80.5 %
Tuberculosis	40	18	50	09	08	09	07	02	24	167	140	4191	5674	- 26.1 %

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

NA = Not Available

Number of Malaria Cases Up to End of August 2020,

02

All are Imported!!!

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. Sudath Samaraweera
CHIEF EPIDEMIOLOGIST
EPIDEMIOLOGY UNIT
231, DE SARAM PLACE
COLOMBO 10