WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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WEEKLY EPIDEMIOLOGICAL REPORT SRI LANKA - 2013

Scabies

Background

Human scabies is caused by an infestation of the skin by the human itch mite (*Sarcoptes scabiei* var. *hominis*). Scabies occurs worldwide and affects people of all races and social classes. Scabies can spread rapidly under crowded conditions where close body contact is frequent. Institutions such as nursing homes, extended-care facilities, and prisons are often sites of scabies outbreaks.

Agent

The human itch mite belongs to the arthropod class Arachnida, subclass Acari, family Sarcoptidae. The mites burrow into the upper layer of the skin but never below the stratum corneum. The burrows appear as tiny raised serpentine lines that are grayish or skin-colored and can be a centimeter or more in length. Other races of scabies mites may cause infestations in other mammals, such as domestic cats, dogs, pigs and horses but these cause only self-limited infestation in humans.

Sarcoptes scabiei undergoes four stages in its life cycle: egg, larva, nymph and adult. Females deposit 2-3 eggs per day as they burrow under the skin. Eggs are oval and 0.10 to 0.15 mm in length and hatch in 3 to 4 days. After the eggs hatch, the larvae migrate to the skin surface and burrow into the intact stratum corneum to construct almost invisible, short burrows called molting pouches. The larval stage, which emerges from the eggs, lasts about 3 to 4 days. After the larvae molt, the resulting nymphs have 4 pairs of legs. This form molts into slightly larger nymphs before molting into adults. Larvae and nymphs may often be found in molting pouches or in hair follicles and look similar to adults, only smaller. Adults are round, sac-like eyeless mites. Females are 0.30 to 0.45 mm long and 0.25 to 0.35 mm wide and males are slightly more than half that size.

Mating takes place only once and leaves the female fertile for the rest of her life. Impregnated females leave their molting pouches and wander on the surface of the skin until they find a suitable site for a permanent burrow. When the impregnated female mite finds a suitable location, it begins to make its characteristic serpentine burrow, laying eggs in the process. After this, the female mite remains there and continues to lengthen her burrow and lay eggs for the rest of her life (1-2 months). Under the most favourable of conditions, about 10% of her eggs eventually give rise to adult mites.

Transmission

Transmission occurs primarily by the transfer of the impregnated females during person-to-person, skin-to-skin contact. Occasionally transmission may occur via fomites (e.g., bedding or clothing). An infested person can spread scabies even if he or she has no symptoms. Humans are the source of infestation; animals do not spread human scabies.

Persons at risk

Scabies can be passed easily by an infested person to his or her household members and sexual partners. Scabies in adults frequently is sexually acquired.

Disease

When a person is infested with scabies mites the first time, symptoms usually do not appear for up to two months (2-6 weeks) after being infested. If a person has had scabies before, symptoms appear much sooner (1-4 days) after exposure.

Common Symptoms

The most common symptoms of scabies, itching and a skin rash, are caused by sensitization (a type of "allergic" reaction) to the proteins and faeces of the parasite. Severe pruritus (itching), especially at night, is the earliest and most common symptom of scabies. A popular (a pimple like) pruritic "scabies rash" is also common.

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Itching and rash may affect much of the body or be limited to common sites such as between the fingers, wrist, elbow, armpit, penis, nipple, waist, buttocks, shoulder blades. The head, face, neck, palms, and soles often are involved in infants and very young children, but usually not adults and older children.

Tiny grayish-white or skin-coloured serpiginous (serpent like) burrows are sometimes seen on the skin due to the female scabies mite tunnelling just beneath the surface of the skin. Because mites are often few in number (only 10-15 mites per person), these burrows may be difficult to find. They are found most often in the webbing between the fingers, in the skin folds on the wrist, elbow, or knee, and on the penis, breast, or shoulder blades.

Possible Complications

The intense itching of scabies leads to scratching that can lead to skin sores. The sores sometimes become infected with bacteria on the skin, such as Staphylococcus aureus or beta-hemolytic streptococci. Sometimes the bacterial skin infection can lead an inflammation of the kidneys called post-streptococcal glomerulonephritis.

Crusted (Norwegian) scabies-Crusted scabies is a severe form of scabies that can affect the elderly, persons who are immunocompromised, or persons who have conditions that prevent them from itching and/or scratching (spinal cord injury, paralysis, loss of sensation, mental debility). Crusted scabies is characterized by vesicles and thick crusts over the skin that can contain many mites. Itching (pruritus) may be absent in crusted scabies because of a patient's altered immune status or neurological condition. Because they are infested with large numbers of mites (up to 2 million), persons with crusted scabies are very contagious. Persons with crusted scabies may not show the usual signs and symptoms of scabies such as the characteristic rash or pruritus.

Diagnosis

Diagnosis of a scabies infestation usually is made based upon the customary appearance and distribution of the the rash and the presence of burrows.

Whenever possible, the diagnosis of scabies should be confirmed by identifying the mite or mite eggs or faecal matter (scybala). This can be done by carefully removing the mite from the end of its burrow using the tip of a needle or by obtaining a skin scraping to examine under a microscope for mites, eggs or mite faecal matter (scybala). However, a person can still be infested even if mites, eggs or faecal matter cannot be found.

Treatment

Suggested General Guidelines

It is important to remember that the first time a person gets scabies they usually have no symptoms during the first 2 to 6 weeks they are infested; however they can still spread scabies during this time.

In addition to the infested person, treatment also is recommended for household members and sexual contacts, particularly those who have had prolonged direct skin-to-skin contact with the infested person. Both sexual and close personal contacts who have had direct prolonged skin-to-skin contact with an infested person within the preceding month should be examined and treated. All persons should be treated at the same time to prevent re-infestation.

Products used to treat scabies are called scabicides because they kill scabies mites; some also kill mite eggs also. Scabicide lotion or cream should be applied to all areas of the body from the neck down to the feet and toes. In addition, when treating infants and young children, scabicide lotion or cream also should be applied to their entire head and neck because scabies can affect their face, scalp and neck as well. The lotion or cream should be applied to a clean body and left on for the recommended time before washing it off. Clean clothing should be worn after treatment.

Bedding, clothing, and towels used by infested persons or their household, sexual, and close contacts (as defined above) anytime during the three days before treatment should be decontaminated by washing in hot water and drying, by dry-cleaning or by sealing in a plastic bag for at least 72 hours (Scabies mites generally do not survive more than 2 to 3 days away from human skin).

Rooms used by a patient with crusted scabies should be thoroughly cleaned and vacuumed after use. Environmental disinfestation using pesticide sprays or fogs generally is unnecessary and is discouraged.

Because the symptoms of scabies are due to a hypersensitivity reaction (allergy) to mites and their feces (scybala), itching still may continue for several weeks after treatment even if all the mites and eggs are killed. If itching still is present more than 2 to 4 weeks after treatment or if new burrows or pimple-like rash lesions continue to appear, retreatment may be necessary.

Skin sores that become infected should be treated with an appropriate antibiotics

Persons with crusted scabies and their close contacts, including household members, should be treated rapidly and aggressively to avoid outbreaks. Institutional outbreaks can be difficult to control and require a rapid, aggressive, and sustained response.

Medication Choices

Prescription medicines used to treat scabies include:

- Permethrin cream 5%, a standard first treatment for scabies. It usually cures scabies infestation after the first application.
- Ivermectin (a pill)-In the United States, treating scabies with ivermectin is an unlabelled use of the medicine. Ivermectin does not work as well as permethrin but is effective against scabies mites.
- Sulfur ointment (precipitated sulfur) 5% to 10%, a milder and less effective medicine than permethrin is sometimes used to treat infants and pregnant or breast-feeding women.
- Crotamiton 10% which is not often used to treat scabies because it does not dependably kill all the mites and their eggs.
- Benzyl benzoate lotion-This should be applied on the entire skin surface from the neck down, including the soles and should be washed after 24 hours.

Source-

Parasites - Scabies, available from *http://www.cdc.gov/parasites/scabies/*

Compiled by Dr. Madhava Gunasekera of the Epidemiology Unit

Table 4: Selected notifiable diseases reported by Medical Officers of Health 29th June – 05th July 2013 (27th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		E Fever		F Poisoning		Leptospirosis		T Fever		V Hepatitis		H 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	232	4723	4	108	0	13	5	77	8	31	3	133	0	5	2	42	0	0	3	255	0	29	0	0	**92**	**8**
Gampaha	98	1940	5	90	0	11	1	25	0	22	1	201	0	11	1	116	0	0	0	99	2	58	0	5	**100**	**0**
Kalutara	36	933	4	86	1	15	0	47	0	13	10	238	0	1	0	13	0	0	3	169	5	45	0	0	**69**	**31**
Kandy	60	1027	5	78	0	6	1	14	0	7	2	45	1	75	0	57	0	0	3	86	0	7	0	2	**87**	**13**
Matale	8	250	0	49	0	2	2	11	0	0	2	42	0	2	1	26	0	0	0	32	0	17	0	4	**69**	**31**
NuwaraEliya	4	130	1	93	0	2	0	6	0	3	0	20	1	43	0	13	0	0	1	48	0	5	0	0	**77**	**25**
Galle	22	481	2	50	0	12	0	2	0	74	1	130	0	25	1	7	0	1	5	160	1	29	0	0	**89**	**11**
Hambantota	8	184	0	25	0	2	1	8	0	11	0	136	4	43	1	66	0	0	0	63	1	16	5	157	**83**	**17**
Matara	15	296	7	49	0	9	2	18	0	27	3	110	2	41	3	119	0	2	1	173	4	40	2	55	**100**	**0**
Jaffna	5	480	3	118	0	5	6	263	2	78	0	6	3	322	1	13	0	0	0	116	0	37	0	0	**83**	**17**
Kilinochchi	0	32	1	14	0	0	0	7	1	4	0	9	0	15	0	0	0	0	0	2	0	7	0	5	**50**	**50**
Mannar	1	57	3	30	0	1	1	54	0	14	0	11	0	17	0	2	0	0	0	11	0	4	0	1	**100**	**0**
Vavuniya	1	48	2	27	0	10	0	7	1	9	0	46	0	2	0	1	0	2	0	19	1	23	0	4	**75**	**25**
Mullaitivu	0	86	0	6	0	1	0	6	0	34	0	28	0	6	0	0	0	2	0	4	0	3	0	9	**60**	**40**
Batticaloa	9	418	11	170	1	4	2	2	0	14	0	23	0	2	0	9	0	1	0	22	2	4	0	0	**57**	**43**
Ampara	4	85	5	53	0	0	0	4	0	2	1	21	0	0	0	2	0	0	0	53	3	10	0	1	**57**	**43**
Trincomalee	1	150	2	40	0	3	0	4	0	1	1	50	0	7	0	3	0	1	0	28	0	2	0	15	**50**	**50**
Kurunegala	37	2038	2	107	0	25	0	27	0	8	6	190	1	20	2	35	0	1	4	223	1	79	3	32	**70**	**30**
Puttalam	12	623	0	36	0	4	1	14	0	35	3	19	1	11	1	3	0	0	1	53	0	15	2	7	**69**	**31**
Anuradhapura	4	351	1	53	0	13	0	3	1	6	0	274	0	15	0	13	1	1	2	103	2	66	2	220	**47**	**53**
Polonnaruwa	4	212	3	46	0	1	0	12	0	53	2	137	0	2	1	20	0	1	6	95	2	12	6	86	**100**	**0**
Badulla	16	275	4	95	0	3	0	10	0	7	1	27	0	46	0	32	0	0	2	81	9	45	0	4	**76**	**24**
Monaragala	6	143	5	67	0	3	0	12	0	18	2	180	0	26	3	53	0	1	2	37	1	11	1	8	**100**	**0**
Ratnapura	24	1172	6	233	0	80	1	31	0	16	2	228	2	24	4	162	0	1	3	99	5	51	0	8	**61**	**39**
Kegalle	30	671	14	63	1	11	0	11	1	5	7	118	2	55	4	145	0	0	0	198	1	65	0	0	**82**	**18**
Kalmune	1	472	3	94	0	1	0	3	0	66	0	4	0	2	0	4	0	0	1	56	0	6	0	1	**38**	**62**
SRI LANKA	**638**	**17277**	**93**	**1880**	**03**	**237**	**23**	**678**	**14**	**558**	**47**	**2426**	**17**	**818**	**25**	**956**	**01**	**14**	**37**	**2285**	**40**	**686**	**21**	**624**	**75**	**25**

Source: Weekly Returns of Communicable Diseases (WRCD).

***T=**Timeliness refers to returns received on or before 05th July , 2013 Total number of reporting units 339. Number of reporting units data provided for the current week:253 C** Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.**H Rabies***= Human Rabies, **E Fever***=Enteric Fever, **F Poison*** =Food Poisoning, **T Fever***=Typhus Fever, **V Hepatitis***=Viral Hepatitis

Table 1: Vaccine-Preventable Diseases & AFP

29th June – 05th July 2013 (27th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2013	Number of cases during same week in 2012	Total number of cases to date in 2013	Total number of cases to date in 2012	Difference between the number of cases to date in 2013 & 2012
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	00	00	00	00	00	00	00	01	00	01	00	44	48	- 08.3 %
Diphtheria	00	00	00	00	00	00	00	00	00	-	-	-	-	-
Mumps	04	01	01	07	02	00	00	01	01	17	15	841	2216	- 62.0 %
Measles	50	11	36	01	03	04	02	05	14	126	00	1068	23	+ 4543.5 %
Rubella	00	00	00	00	00	00	00	00	00	00	-	14	-	-
CRS**	00	00	00	00	00	00	00	00	00	00	-	06	-	-
Tetanus	00	00	00	00	00	00	00	00	00	00	00	11	05	+ 120.0 %
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	-	-
Whooping Cough	02	01	00	00	00	00	00	00	00	03	00	52	34	+ 52.9 %
Tuberculosis	06	19	35	00	17	89	05	03	00	174	279	4284	4632	- 08.3 %

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

You have a duty and a responsibility in preventing dengue fever. Make sure that your environment is free from water collections where the dengue mosquito could breed .

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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. Prior approval should be obtained from the Epidemiology Unit before publishing data in this publication**

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