



WEEKLY EPIDEMIOLOGICAL REPORT

A publication of the Epidemiology Unit
Ministry of Health

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Vol. 42 No. 30

18th – 24th July 2015

Infective Conjunctivitis

Conjunctivitis means 'inflammation of the conjunctiva', and the commonest cause is infection by viruses or bacteria. It can also be due to allergens, contact lens use (especially the extended-wear type), chemicals, traditional eye remedies, fungi and certain diseases.

Viral Conjunctivitis

Viral conjunctivitis can be caused by following viruses. Adenoviruses (most common), Picornaviruses, such as enterovirus 70 and coxsackievirus A24, Rubella virus, Rubeola (measles) virus, Herpesviruses, including Herpes simplex virus, Varicella-zoster virus, which also causes chickenpox and shingles, Epstein-Barr virus, which also causes infectious mononucleosis.

Viral conjunctivitis is highly contagious. Most viruses that cause conjunctivitis are spread through hand-to-eye contact by hands or objects that are contaminated with the infectious virus. Hands can become contaminated by coming in contact with infectious tears, eye discharge, fecal matter, or respiratory discharges.

Viral conjunctivitis can often be diagnosed from symptoms and patient history. For example, if conjunctivitis accompanies a common cold or respiratory tract infection and if discharge from the eye is watery rather than thick, the cause is likely a virus. The history the patient (for example, having contact with someone with conjunctivitis or having allergies) and examination of the eye can also help a doctor make a firm diagnosis.

Laboratory tests are not usually needed to diagnose viral conjunctivitis. However, testing may be done if a more severe form of viral conjunctivitis is suspected, such as conjunctivitis caused by herpes simplex virus or varicella-zoster virus. This testing is done using a sample of the dis-

charge from an infected eye.

Depending on the cause of viral conjunctivitis, some patients may have additional symptoms or conditions, such as the following:

Common cold, flu or other respiratory infection-conjunctivitis often occurs with respiratory infections; sometimes the lymph node near the front of the ear is enlarged and painful. Pharyngoconjunctival fever is where conjunctivitis as well as fever and sore throat can occur with this syndrome, which is most commonly caused by infection with adenovirus serotypes 3, 4, and 7. Epidemic keratoconjunctivitis is a more severe type of conjunctivitis; it is commonly caused by infection with adenovirus serotypes 8, 19 and 37. Acute hemorrhagic conjunctivitis is sometimes accompanied with nervous system involvement; it is associated with enterovirus 70 and coxsackievirus A24. Herpetic keratoconjunctivitis is associated with herpes simplex virus and blister-like lesions on the skin; it may affect only one eye. Rubella and rubeola (measles) conjunctivitis can occur with these viral rash illnesses, which are usually accompanied by rash, fever and cough.

Bacterial Conjunctivitis

Bacteriae which most commonly cause bacterial conjunctivitis are Staphylococcus aureus, Haemophilus influenzae, Streptococcus pneumoniae, Moraxella catarrhalis. Bacterial conjunctivitis is highly contagious. Most bacteriae that cause conjunctivitis are spread through direct hand-to-eye contact from contaminated hands. People can get conjunctivitis just by touching or using something that has been infected by a person who has the eye infection. Infectious conjunctivitis (viral or bacterial) can also spread by large respiratory tract droplets. Bacterial conjunctivitis is less common in children older than 5

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years of age.

Bacterial conjunctivitis can usually be diagnosed by a doctor, nurse or other healthcare provider from symptoms and patient history. For example, if conjunctivitis occurs at the same time as an ear infection and if discharge from the eye is thick rather than watery, the cause may be a bacterium. Obtaining samples of eye discharge is not routinely done. Acute bacterial conjunctivitis is the most common form of bacterial conjunctivitis in outpatient healthcare settings. Depending on the cause of bacterial conjunctivitis, some patients may have additional symptoms or conditions, such as the following:

- Hyperacute bacterial conjunctivitis — This is a more severe type of conjunctivitis develops rapidly and is accompanied by a lot of yellow-green discharge that returns even after being wiped away from the eye(s). This is most often caused by *Neisseria gonorrhoeae* in sexually active adults.
- Chronic bacterial conjunctivitis — often develops along with another inflammatory condition (blepharitis) that promotes bacteria growing in the eyelid; flaky debris and warmth along the lid may also be present.

Inclusion (chlamydial) conjunctivitis is more common in newborns; includes redness of the eye(s), swelling of the eyelids and discharge of pus, usually 5 to 12 days after birth. Gonococcal conjunctivitis is more common in newborns; includes red eyes, thick pus in the eyes and swelling of the eyelids, usually 2 to 4 days after birth.

Treatment

The treatment for conjunctivitis depends on the cause. Most cases of viral conjunctivitis are mild. The infection will usually clear up in 7–14 days without treatment and without any long-term consequences. There is no specific treatment for viral conjunctivitis. Artificial tears and cold packs may be used to relieve the dryness and inflammation (swelling) caused by conjunctivitis. Antibiotic eye drops prevent secondary infection from bacteria and tetracycline eye ointment can be soothing. Topical steroid eye drops should never be given for conjunctivitis due to infection.

However, mild bacterial conjunctivitis may get better without antibiotic treatment and without any severe complications. Use of antibiotics is associated with increased antibiotic resistance and increased costs and should be a shared decision between the doctor and the patient.

When to Seek Medical Care

A healthcare provider should be seen if

- Conjunctivitis is accompanied by moderate to severe pain in the eye(s), vision problems, (sensitivity to light or blurred vision), intense redness in the eye(s).
- Conjunctivitis symptoms become worse or persist when a patient is suspected of having a severe form of viral conjunctivitis

- Conjunctivitis occurs in a patient who is immunocompromised (has a weakened immune system) from HIV infection, cancer treatment or other medical conditions or treatments.
- Bacterial conjunctivitis treated with antibiotics does not begin to improve after 24 hours of treatment

Sources

1. Conjunctivitis, available at <http://www.cehjournal.org/article/conjunctivitis/>
2. Conjunctivitis, available at <http://www.cdc.gov/conjunctivitis/>

Compiled by Dr H.H.W.S.B Herath of the Epidemiology Unit

**Table 1 : Water Quality Surveillance
Number of microbiological water samples June/ 2015**

| District | MOH areas | No: Expected * | No: Received |
|---------------|-----------|----------------|--------------|
| Colombo | 12 | 72 | 109 |
| Gampaha | 15 | 90 | 94 |
| Kalutara | 12 | 72 | 81 |
| Kalutara NIHS | 2 | 12 | NR |
| Kandy | 23 | 138 | 10 |
| Matale | 12 | 72 | NR |
| Nuwara Eliya | 13 | 78 | 0 |
| Galle | 19 | 114 | 89 |
| Matara | 17 | 102 | 0 |
| Hambantota | 12 | 72 | 26 |
| Jaffna | 11 | 66 | 16 |
| Kilinochchi | 4 | 24 | 0 |
| Manner | 5 | 30 | NR |
| Vavuniya | 4 | 24 | 13 |
| Mullatvu | 4 | 24 | 30 |
| Batticaloa | 14 | 84 | 0 |
| Ampara | 7 | 42 | 72 |
| Trincomalee | 11 | 66 | 0 |
| Kurunegala | 23 | 138 | 21 |
| Puttalam | 9 | 54 | NR |
| Anuradhapura | 19 | 114 | 40 |
| Polonnaruwa | 7 | 42 | 0 |
| Badulla | 15 | 90 | 105 |
| Moneragala | 11 | 66 | 88 |
| Rathnapura | 18 | 108 | 89 |
| Kegalle | 11 | 66 | 59 |
| Kalmunai | 13 | 78 | 0 |

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

Table 1: Selected notifiable diseases reported by Medical Officers of Health 11th - 17th July 2015 (29th 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 | 149 | 5198 | 0 | 119 | 1 | 7 | 1 | 59 | 15 | 93 | 2 | 166 | 0 | 6 | 0 | 24 | 0 | 3 | 6 | 289 | 0 | 24 | 0 | 0 | 81 | 19 |
| Gampaha | 48 | 2386 | 0 | 56 | 0 | 5 | 0 | 23 | 0 | 25 | 3 | 244 | 0 | 7 | 2 | 91 | 0 | 0 | 2 | 135 | 1 | 15 | 0 | 2 | 73 | 27 |
| Kalutara | 22 | 869 | 0 | 69 | 0 | 4 | 0 | 27 | 0 | 71 | 4 | 202 | 1 | 3 | 0 | 19 | 0 | 2 | 4 | 179 | 1 | 33 | 0 | 0 | 69 | 31 |
| Kandy | 15 | 742 | 3 | 76 | 0 | 6 | 1 | 21 | 0 | 25 | 2 | 74 | 0 | 40 | 1 | 101 | 0 | 0 | 1 | 146 | 2 | 10 | 0 | 9 | 78 | 22 |
| Matale | 1 | 330 | 0 | 31 | 0 | 0 | 0 | 7 | 0 | 5 | 1 | 45 | 0 | 7 | 1 | 24 | 0 | 0 | 0 | 13 | 0 | 10 | 0 | 13 | 54 | 46 |
| NuwaraEliya | 1 | 101 | 6 | 231 | 0 | 3 | 0 | 13 | 0 | 0 | 3 | 21 | 1 | 41 | 0 | 43 | 0 | 0 | 5 | 87 | 1 | 32 | 0 | 0 | 92 | 8 |
| Galle | 7 | 447 | 0 | 43 | 0 | 2 | 0 | 6 | 0 | 19 | 3 | 148 | 2 | 39 | 0 | 6 | 0 | 0 | 3 | 168 | 1 | 30 | 0 | 2 | 70 | 30 |
| Hambantota | 8 | 177 | 1 | 21 | 0 | 0 | 0 | 7 | 10 | 21 | 1 | 61 | 0 | 29 | 0 | 25 | 0 | 0 | 3 | 80 | 0 | 9 | 5 | 191 | 83 | 17 |
| Matara | 5 | 243 | 1 | 44 | 0 | 5 | 0 | 4 | 0 | 44 | 3 | 101 | 0 | 21 | 0 | 18 | 0 | 0 | 3 | 159 | 1 | 15 | 9 | 71 | 100 | 0 |
| Jaffna | 8 | 1164 | 21 | 442 | 0 | 9 | 2 | 149 | 4 | 58 | 0 | 13 | 6 | 531 | 0 | 10 | 0 | 2 | 2 | 154 | 0 | 9 | 0 | 0 | 100 | 0 |
| Kilinochchi | 2 | 44 | 0 | 55 | 0 | 0 | 0 | 9 | 0 | 31 | 0 | 1 | 0 | 21 | 0 | 0 | 0 | 1 | 0 | 14 | 0 | 0 | 0 | 0 | 75 | 25 |
| Mannar | 1 | 76 | 0 | 7 | 0 | 1 | 0 | 5 | 0 | 2 | 0 | 8 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 1 | 80 | 20 |
| Vavuniya | 1 | 87 | 0 | 14 | 0 | 6 | 0 | 53 | 0 | 5 | 0 | 15 | 0 | 13 | 0 | 1 | 0 | 2 | 0 | 36 | 0 | 10 | 0 | 4 | 75 | 25 |
| Mullaitivu | 1 | 101 | 1 | 18 | 0 | 2 | 3 | 9 | 0 | 1 | 0 | 3 | 0 | 7 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 3 | 0 | 4 | 80 | 20 |
| Batticaloa | 11 | 1284 | 5 | 182 | 0 | 6 | 2 | 19 | 0 | 123 | 0 | 9 | 0 | 2 | 0 | 10 | 0 | 1 | 1 | 29 | 0 | 16 | 0 | 0 | 57 | 43 |
| Ampara | 1 | 37 | 0 | 28 | 0 | 1 | 0 | 1 | 0 | 8 | 0 | 10 | 0 | 1 | 0 | 3 | 0 | 0 | 4 | 152 | 0 | 5 | 1 | 3 | 43 | 57 |
| Trincomalee | 6 | 490 | 0 | 38 | 0 | 0 | 1 | 18 | 0 | 34 | 1 | 13 | 0 | 15 | 0 | 7 | 0 | 1 | 3 | 62 | 0 | 3 | 0 | 1 | 92 | 8 |
| Kurunegala | 14 | 854 | 3 | 106 | 0 | 2 | 0 | 3 | 0 | 13 | 5 | 184 | 1 | 21 | 0 | 31 | 0 | 4 | 5 | 276 | 1 | 23 | 2 | 74 | 78 | 22 |
| Puttalam | 30 | 513 | 1 | 29 | 0 | 4 | 0 | 4 | 0 | 6 | 0 | 24 | 1 | 15 | 0 | 1 | 0 | 0 | 0 | 34 | 0 | 21 | 0 | 2 | 54 | 46 |
| Anuradhapura | 3 | 280 | 0 | 49 | 0 | 1 | 0 | 2 | 0 | 55 | 2 | 171 | 1 | 19 | 1 | 9 | 0 | 1 | 0 | 119 | 0 | 20 | 5 | 183 | 63 | 37 |
| Polonnaruwa | 1 | 131 | 1 | 28 | 0 | 3 | 0 | 7 | 0 | 3 | 0 | 49 | 0 | 1 | 0 | 4 | 0 | 0 | 1 | 89 | 0 | 17 | 0 | 56 | 29 | 71 |
| Badulla | 6 | 387 | 2 | 130 | 0 | 4 | 1 | 8 | 0 | 7 | 1 | 45 | 2 | 70 | 3 | 125 | 0 | 2 | 3 | 130 | 0 | 53 | 0 | 6 | 71 | 29 |
| Monaragala | 3 | 131 | 2 | 77 | 0 | 3 | 1 | 14 | 0 | 3 | 3 | 134 | 0 | 52 | 3 | 48 | 0 | 1 | 2 | 62 | 2 | 13 | 2 | 20 | 82 | 18 |
| Ratnapura | 13 | 631 | 1 | 196 | 2 | 10 | 0 | 33 | 2 | 6 | 3 | 198 | 4 | 45 | 2 | 144 | 0 | 0 | 3 | 75 | 0 | 36 | 9 | 13 | 72 | 28 |
| Kegalle | 7 | 359 | 0 | 45 | 0 | 8 | 0 | 49 | 0 | 8 | 2 | 204 | 0 | 31 | 1 | 65 | 0 | 0 | 0 | 137 | 1 | 34 | 0 | 0 | 64 | 36 |
| Kalmunei | 1 | 424 | 2 | 88 | 0 | 1 | 0 | 1 | 0 | 33 | 1 | 6 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 80 | 0 | 8 | 0 | 0 | 62 | 38 |
| SRILANKA | 365 | 17486 | 50 | 2222 | 3 | 93 | 12 | 551 | 31 | 699 | 40 | 2149 | 19 | 1055 | 14 | 813 | 0 | 20 | 51 | 2716 | 11 | 449 | 33 | 655 | 73 | 27 |

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 17th July, 2015. Total number of reporting units 337. Number of reporting units data provided for the current week: 250. C**=Completeness. A = Cases reported during the current week. B = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

11th - 17th July 2015 (29th Week)

| Disease | No. of Cases by Province | | | | | | | | | Number of cases during current week in 2015 | Number of cases during same week in 2014 | Total number of cases to date in 2015 | Total number of cases to date in 2014 | Difference between the number of cases to date in 2014 & 2015 |
|-----------------------|--------------------------|----|----|----|----|----|----|----|-----|---|--|---------------------------------------|---------------------------------------|---|
| | W | C | S | N | E | NW | NC | U | Sab | | | | | |
| AFP* | 00 | 00 | 01 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 01 | 43 | 50 | -14 |
| Diphtheria | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 0% |
| Mumps | 01 | 00 | 01 | 01 | 00 | 01 | 01 | 03 | 00 | 08 | 05 | 227 | 417 | -45.5% |
| Measles | 38 | 00 | 07 | 00 | 07 | 03 | 00 | 06 | 04 | 65 | 53 | 1494 | 2170 | -31.1% |
| Rubella | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 06 | 13 | -54.1% |
| CRS** | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 04 | -100% |
| Tetanus | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 11 | 09 | +22.2% |
| 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 | 07 | 18 | 61.1% |
| Whooping Cough | 00 | 00 | 00 | 00 | 00 | 00 | 02 | 00 | 00 | 02 | 01 | 50 | 32 | +56.2% |
| Tuberculosis | 61 | 22 | 22 | 14 | 11 | 03 | 00 | 06 | 00 | 139 | 157 | 5318 | 5442 | -2.2% |

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

| Influenza Surveillance in Sentinel Hospitals - ILI & SARI | | | | | | | | |
|---|-------------|---------------|----------|--------|--------|----------------|---------------|-----------|
| Month | Human | | | | | Animal | | |
| | No Received | ILI | SARI | Infl A | Infl B | Pooled samples | Serum Samples | Positives |
| June | 2877 | Not Performed | Clinical | 607 | 22 | 531 | 666 | 0 |

Source: Medical Research Institute & Veterinary Research Institute

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

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