

*Editorial*

## Editorial note on diphtheria infection

Daniel Sams\*

Department of Infectious Diseases Research, Federal University of São Paulo, Brazil.

Accepted 20 May, 2021

### EDITORIAL NOTE

Diphtheria is an infection generated by the bacterium *Corynebacterium diphtheriae*. Signs and symptoms may range from mild to severe. They usually start two to six days after exposure. Symptoms often come on fairly gradually, starting with a sore throat and fever. In severe cases, a grey or white patch expands in the throat. This can block the airway and create a barking cough as in croup. The neck may swell in part due to enlarged lymph nodes. A form of diphtheria which involves the skin, eyes or genitals also exists. Complications may include myocarditis, inflammation of nerves and kidney problems, and bleeding problems due to low levels of platelets. Myocarditis may result in an abnormal heart rate and inflammation of the nerves may result in paralysis.

Diphtheria is commonly spread between people by direct contact or through the air. It may also be spread by contaminated items. Some people carry the bacterium without having symptoms, but can still spread the disease to other people. The 3 main types of *C. diphtheriae* causes different severities of disease. The symptoms are due to a toxin composed by the bacterium. Diagnosis can often be made based on the appearance of the throat with confirmation by microbiological culture. Earlier infection may not protect against future infection.

A diphtheria vaccine is effective for prevention and possible in a number of formulations. 3 or 4 doses, given along with tetanus vaccine and pertussis vaccine, are recommended during childhood. Further doses of diphtheria-tetanus vaccine are recommended every ten years. Control Protection can be verified by measuring the antitoxin level in the blood. Diphtheria can be prevented in those exposed as well as treated with the antibiotics erythromycin or benzylpenicillin. A tracheotomy is

sometimes needed to open the airway in severe cases.

### Skin (cutaneous) diphtheria

A 2nd type of diphtheria can affect the skin, causing pain, redness and swelling similar to other bacterial skin infections. Ulcers covered by a grey membrane also may be skin diphtheria.

Although it's very common in tropical climates, diphtheria on the skin also occurs in the United States, particularly among people with poor hygiene who live in crowded conditions.

The bacteria most commonly infect your nose and throat. Once you're infected, the bacteria release dangerous substances called toxins. The toxins spread through your bloodstream and often cause a thick, grey coating to form in these areas of the body:

- Nose
- throat
- tongue
- airway

In some cases, these toxins can also damage other organs, including the heart, brain, and kidneys.

Washing your hands repeatedly with warm water and soap helps prevent infections. Use an alcohol-based hand sanitizer to help kill infection-causing germs when soap and water aren't available. You should also keep your vaccinations up to date.

\*Corresponding author. Daniel Sams, E-mail: [danielseams852@gmail.com](mailto:danielseams852@gmail.com).