



CLINICAL DISEASE: DIPHTHERIA



Diphtheria is an acute infectious disease that primarily affects the upper respiratory tract, and is caused by *Corynebacterium diphtheriae*. Humans are the only known source of *C. diphtheriae*, and the bacteria are spread by infected droplets which localise in the tonsils, throat and nose. After an incubation period of 2 to 7 days, non-specific symptoms characterised by fever, sore throat, diminished activity and irritability in children, appear. Because diphtheria affects almost any mucous membrane, the disease is classified according to the site involved.

- **Anterior nasal diphtheria**

The onset is indistinguishable from that of the common cold and is characterised by a mucopurulent discharge which may obscure the presence of a greyish-white membrane on the nasal septum. The disease is usually mild because of the poor absorption of the toxin at this site.

- **Pharyngeal and tonsillar diphtheria**

Usually begins insidiously with symptoms such as malaise, anorexia, sore throat and low-grade fever. Within 48 to 72 hours a greyish-white membrane forms on the soft palate. Attempts to remove the membrane are followed by bleeding. Pharyngotonsillar involvement is characterised by cervical adenitis, in which the marked swelling produces a bull-neck appearance in severe cases. The course of the illness is variable. Severe cases are characterised by increasing toxæmia manifested by severe prostration, striking pallor, rapid pulse, coma, and death within 6 to 10 days.

- **Laryngeal diphtheria**

Most often develops as an extension of the pharyngeal form and symptoms include hoarseness, fever, dyspnoea, and a barking cough. The increasing obstruction of the airway by the membrane may be followed by progressive hypoxia, which is manifested by restlessness, cyanosis, severe prostration, coma and death.

- **Cutaneous Diphtheria**

Skin infection is characterised by scaling rash or deep rounded ulcers with clearly demarcated edges and a membranous base, but any lesions can harbour *C. diphtheriae* organisms. Because toxin is absorbed slowly from cutaneous sites, complications are relatively uncommon following cutaneous infection.

Most complications of diphtheria, including death are attributable to the toxin and they include myocarditis, neuritis, otitis media and respiratory insufficiency.

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