

Microbial Diseases Of Skin, Nails And Hair

The skin, nails and hair make up the covering of the human body. The skin consists of the outer, epidermis layer and the lower, dermis layer. The functions of the skin include excretion, receiving external stimuli, secretion, temperature regulation, and serving as a natural barrier to most microbial disease agents.

1-Bacterial diseases: anthrax, erysipelas, gas gangrene, impetigo, green-nail syndrome, leprosy, scarlet fever, tetanus and wound infections.

2-Mycotic Infections: Fungi that mainly attack the skin, hair, nails and mucosal surfaces are called superficial or surface fungi.

Systemic mycoses are associated with the deeper tissues. Some fungi that normally are not pathogenic but take advantage of lower host resistance are called opportunists.

Dermatophycoses (fungal infections of skin, hair, and nails) are examples of Ringworm (Tinea).

Ringworm of the body----- Tinea corporis

Ringworm of the feet----- Tinea pedis

Head----- Tinea capitis

Groin area----- Tinea cruris

.Other diseases caused by fungi, yeast infection (Thrush) is caused by *Candida albicans*.

3-Viral infection of skin: Examples of viral diseases of the skin include chicken pox, cold sore, measles, small pox, and warts.

The M.O.s normally found in the human mouth can be divided into 3 groups on the basis of their oxygen requirements:

- 1-Strict anaerobes (Borrelia, spiral gram negative; Fusobacterium ,rods gram negative).
- 2- Strict aerobes (Nocardia,coccid to rods).
- 3- facultative organs (Lactobacilli).

In addition to bacteria It includes several species of fungi, viruses, and protozoa

Nonspecific infections of the oral region:

Include those conditions that exist in the supporting structures of the teeth and the changes from infected teeth examples include:

Tooth decay (caries)

Infected gum (gingivitis)

Inflammation and destruction of the bone (osteomyelitis)

Inflammation of tissue directly supporting the teeth (periodontitis)

Diseases related to oral foci of infection:

1-Bacterial infections: anthrax, syphilis, and tuberculosis

2-Myotic infections : candidiasis

3-Viral infections: chicken pox, herpes simplex, and mumps

Microbial Infections Of The Respiratory

Structure of R.T :

The Pharynx(Throat): is a pass way for food and air.It is associated with the Tonsils(Lymphoid tissue) and is connected with the middle ear by means of the Eustachian tubes.

The trachea (windpipe): is a thin tube that passes from the voice box ,or larynx ,into the chest cavity. here it divides into two primary bronchi.

The Lungs And The Primary Bronchi :

- 1- lung is divided into lobes ,with the right lung consisting of three and left lung two
- 2-The bronchial tree is formed from two large bronchi, each of which divide and sub divide into smaller bronchi
- 3-The smaller bronchi in turn lead into tube like structures of varying sizes,the bronchioles
- 4-Bronchioles branch into alveolar ducts. Gaseous exchanges occur the air sacs, or alveoli, which develop from these ducts
- 5- Two membranes, the inner and the outer pleura, form a sac that encloses the lungs. The potential cavity between these membrane **called the pleural cavity** .

Normal flora of R.T :

The normal flora of human nose include a variety of bacterial species, some of which Have the potential to cause disease. In the adult human the R.T. below the level of the epiglottis is normally sterile .

Upper Respiratory Infections:

- 1- The upper respiratory region, which includes the middle ear, mastoids, sinuses, and nasal corners of the eyes, are exposed to a variety of pathogens.

2- Infections in these sites can spread to other regions of the respiratory tract.

3-Examples of bacterial infections of this region include:

-The toxin associated diphtheria.

-Suppurative otitis media.

-Streptococcal sore throat.

4-Viral diseases of the U.R.T. include the common cold, croup, and minor infections.

Lower Respiratory Infections

1-Several diseases of the lower respiratory tract are life-threatening if not treated quickly and adequately. These diseases are usually acquired through the inhalation of the diseases agent.

2- Bacterial infections of this portion of the respiratory system include the pneumonias caused by such organisms as Streptococcus, Pneumoniae, Mycoplasma infections, Psittacosis, Q fever, Tuberculosis, other mycobacterial diseases, and whooping cough.

3- Fungus infections of the lower respiratory tract include:

coccidioidomycosis, histoplasmosis, and North American blastomycosis.

4- Influenza epidemics have caused severe infections in humans and animals for centuries. These virus infections can be complicated by secondary bacterial invaders.

5-The protozoan Pneumocystis carinii causes infections of the air sacs and supporting structures. The disease agent infects individuals having some form of impairment of their immunologic systems.