

Chapter 7

Medical Microecology & Hospital Infection

Section 1

Normal flora

normal flora

the microorganism that parasitize on the body surface or tracts connecting with external, don't harm the host in ordinary condition.

I. Distribution of normal flora

◆ skin

◆ oral cavity: anaerobes

◆ intestinal tract:

anaerobes: aerobes=1000:1

◆ vagina: Lactobacillus.

◆ respiratory

II. Role of normal flora.

1. Biological barrier: antagonism

2. nutrient synthesize :

amino acid, V_B , V_K → enhance absorb

**3. immunity: enhance and develop
and maturation of immune
system**

Section 2

microeubiosis

microdysbiosis

flora disequilibrium (dysbacteriosis)

Balance of normal flora was broken.

● widely use antibiotics, sensitive bacteria were killed ,the resistant bacteria reproduce rapidly.

● change their normal parasite sites.

● host immunity reduce.

Section 3

opportunistic infection

I. opportunistic pathogenic bacteria

some bacteria are unable to cause infection in ordinary condition , but can initiate infection under some certain condition.

opportunistic pathogen

some bacteria are unable to cause in ordinary condition , they initiate infection

If:

**(1) they leave their ordinary habitant
and gain access to other part.**

(2) host immunity reduce.

**(3)owing to the wide use of antibiotic,
hormone and anti-cancer drugs.**

II. Characters of opportunistic pathogen

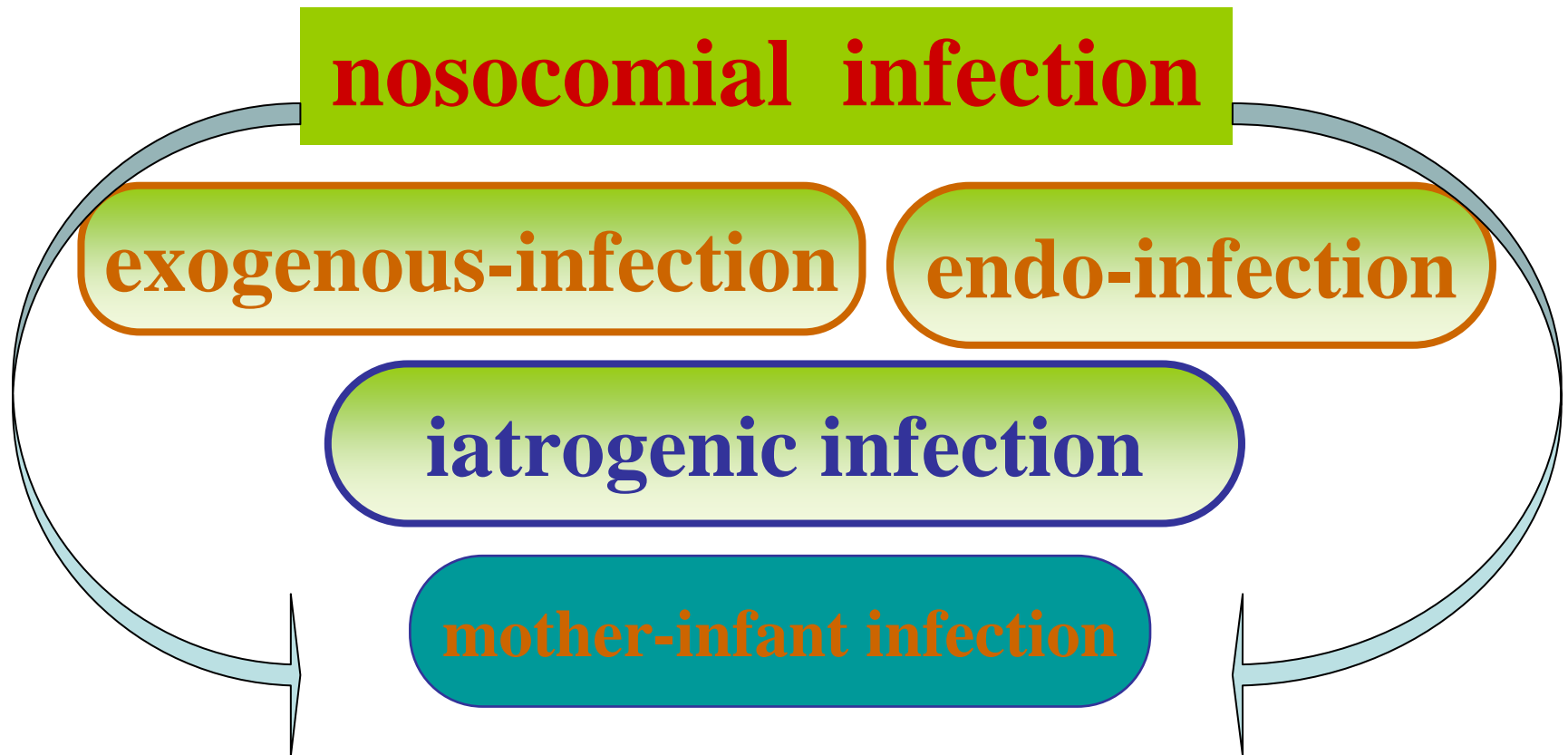
- 1. weak or no-more apparent virulence**
- 2. drug-resistant bacteria or
multi-resistant bacteria**
- 3. occur new opportunistic pathogen**

Section 4

Hospital Infection

Hospital acquired infection

Infections acquired during hospital stays.



Prevention of nosocomial infections

1. disinfection /sterilization

changes to hospital staff activities

changes to the patient environment

changes to hospital environment

2. isolation precaution

3. rational usage bactericidal drug