

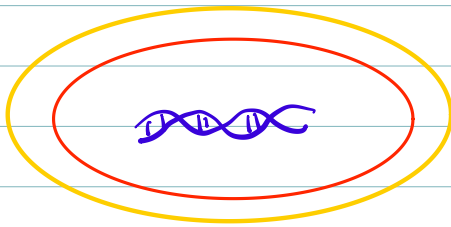
⊗ DNA viruses

- ↳ poxviridae
- ↳ parvoviridae
- ↳ Adenoviridae

Ⓐ poxviridae

General Characteristics

- Double stranded DNA (dsDNA)
- Enveloped
- Very large viruses
- Complex symmetry (Not icosahedral)
- Replicates in cytoplasm



① Variola Virus (Smallpox) الجبري

* eradicated اختفى

- Stable Antigen

vaccine  very effective
live-attenuated

- Only in humans (no reservoir) ما يصيب حداً إلا الإنسان
- 100% Symptomatic

→ Transmission via Respiratory droplets

Direct contact with lesions, Contaminated fomites

- Very high mortality (~30%) fetal ?

Shock, Multi-organ failure, Secondary bacterial infection (pneumonia, Sepsis)

② Monkey pox

- Entry through Broken skin/mucosa → Lymph nodes → Viremia → Systemic Spread

→ Vesiculopustular rash (not maculopapular rash)

→ Diagnosis : PCR of lesion

→ Treatment : Supportive + Tecovirimat in severe

→ Vaccine : Only high risk, not general population

③ Molluscum contagiosum



Umbilicated papules
حطاطات ذات قعر مركزي

- Infects Keratinocytes يصيب خلايا الجلد
- Localized proliferation
- Self-limited
- No systemic spread

Transmission

- ↳ Skin to skin
- ↳ Fomites
- ↳ Scratching
- ↳ Autoinoculation
- ↳ Sexually in adults

Diagnosis and Treatment

- ↳ Clinical diagnosis, Not Em. diag.
- ↳ Curettage
- ↳ Cryotherapy
- ↳ Topical antivirals (Many self resolve)

④ parvoviruses لآزم يبي العلية تون بار S phase

- Single-stranded DNA Replication خلايا قاعدة يتعمل
- Non-enveloped

2 Members: parvovirus B19

Bocavirus

Transmission by Respiratory secretions

Mother to child

* Tropism = أي نوع خلايا أو انسجة يقدر ينفذها ويتكاثر فيها

B19 → Erythroid progenitors

Bocavirus → Respiratory epithelial cells

① Bocovirus:

- Upper and Lower respiratory tract infection

② B19 in children

- Fever, Rash, Erythema infectiosum

Fifth disease, Slapped cheek syndrome →

② B19 in Adults → Arthritis

Other parovirus B19 disease in special groups of patients

Immunosuppressed → Pure red cell aplasia → Chronic anemia

Chronic anemia patients → Transient aplastic crisis → Severe acute anemia

Congenital infection → Hydrops fetalis → May be fatal

One Line memory Formula

- B19 hits Bone marrow → RBC → Anemia problems → fetus dies
- Bocavirus hits Breathing → Respiratory infections.



Treatment:

Supportive only

Diagnosis:

- Clinical
- PCR
- Serology (IgM)

© Adenoviridae → Supportive treatment, Diagnosis: Antigen detection, PCR

- dsDNA, non enveloped
- Transmission: Respiratory, fecal, oral, Direct contact

*Tropism: Respiratory, eyes, GI, Urinary

Clinical features:

↳ Upper and lower respiratory tract infections.

(Adenoviruses are the most common causes of pharyngitis)

↳ Gastroenteritis

↳ Conjunctivitis

↳ Cystitis

• Infection can occur year around without seasonality

• prevention: Vaccine: live attenuated for some pneumonia serotypes.