



SNS COLLEGE OF NURSING
Saravanam Patti (po), Coimbatore.



DEPARTMENT OF NURSING

COURSE NAME : B.Sc. (Nursing) II Year.

SUBJECT : MEDICAL SURGICAL NURSING I

UNIT : 11-ACQUIRED IMMUNO DEFICIENCY SYNDROME

TOPIC : AIDS



ACQUIRED IMMUNODEFICIENCY SYNDROME

DEFINITION

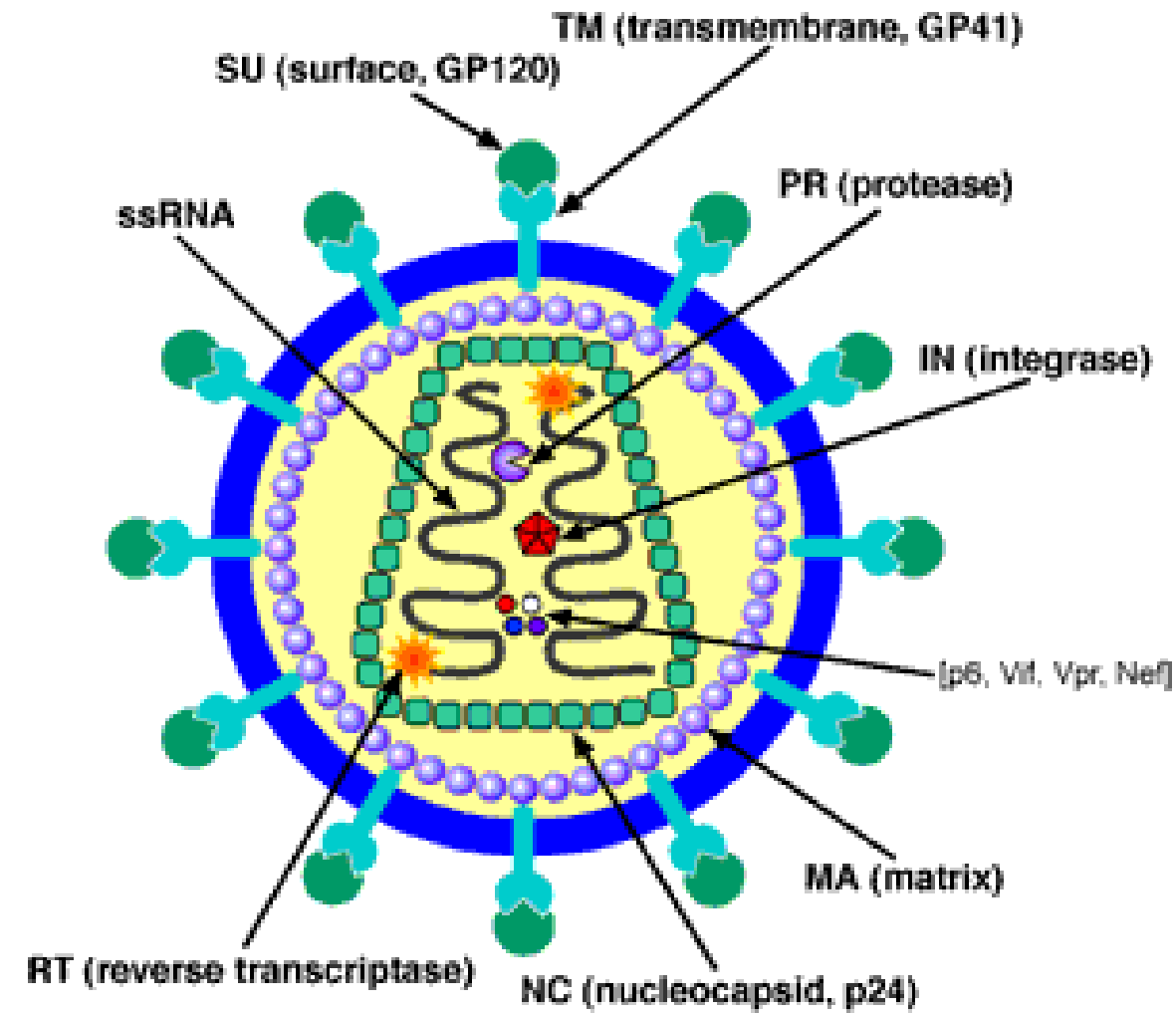
- *Acquired Immunodeficiency syndrome* is a chronic potentially life threatening condition caused by *Human Immunodeficiency virus*.
- *Acquired immunodeficiency syndrome*, a *syndrome caused by infection with the human immunodeficiency virus (HIV)*, with ensuing compromise of the *body's immune system*.



EPIDEMIOLOGY

- HIV/AIDS is a global pandemic.
- As of 2017, approximately 36.9 million people are infected with HIV globally
- There were about 940,000 deaths from AIDS in 2017
- In 2018, approximately 43% patients are women.

HUMAN IMMUNODEFICIENCY VIRUS



Etiology :-

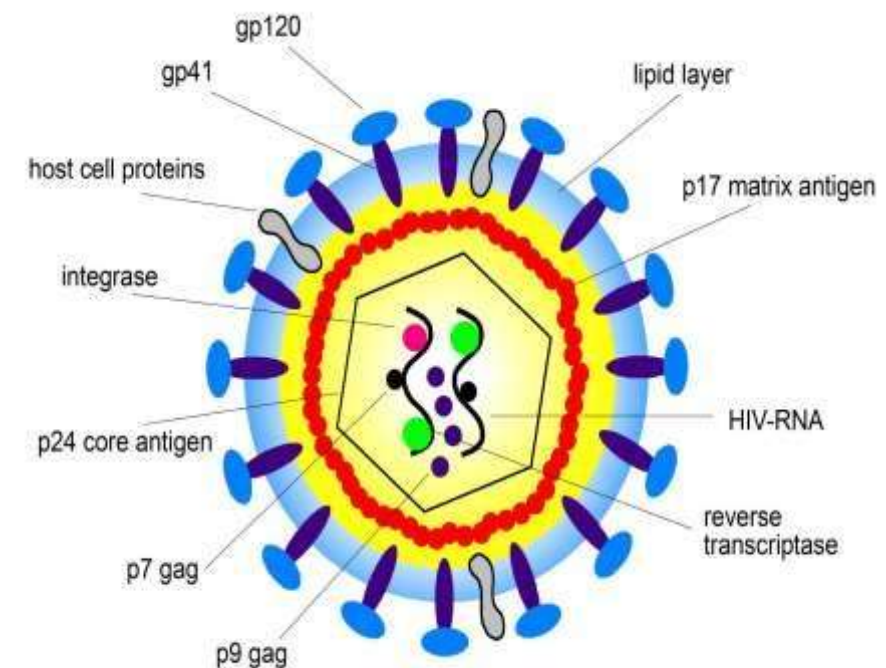
AIDS is an advanced stage of infection caused by HIV, which may be of the following

Two types:

1 HIV-1: Common in all over the world and most common in sub-Saharan Africa. Highly Transmissible.

2 HIV-2: Limited to Western Africa, part of Europe, and India. Less Transmissible.

➤ HIV is an enveloped RNA virus.



Mode of transmission



Unprotected sexual intercourse with an infected partner

Vertical transmission (from mother to child)

- in utero (Antenatal)
- during delivery (Intranatal)
- breastmilk (Postnatal)

Injection drug use (rare: infected blood/blood products)

HIV infection



Mode of transmission

- **Parenteral**- In 15 % cases, it is by blood transfusion or blood product transfusion.
- **Sharing of unsterilized needles** or syringes in drug addicts contaminated with blood from an infected person can spread virus.
- HIV can be spread in health-care settings through **accidental needle sticks** or contact with contaminated fluids.
- HIV can also spread through **organ transplantation**.
- Donors are now tested for HIV to minimize this risk.



PATHOPHYSIOLOGY

- Binding and Fusion (CD 4 CELLS)
- Reverse Transcription(DOUBLE STRANDED DNA)
- Integration(INTO THEHOST CELL)
- Transcription(MULTIPLICATION OF RNA)
- Assembly(HIV CUTS ITS PROTEASE LONG CHAIN INTO THE SMALLER PIECES)



PATHOPHYSIOLOGY

Budding □(NEWLY ASSEMBLED VIRUS ENTER INTO CD4)



STAGING OF HIV DISEASE

- Primary HIV Infection
- HIV Asymptomatic
- HIV Symptomatic
- Acquired Immunodeficiency Syndrome.



PRIMARY HIV INFECTION

- 1-4 weeks after exposure
- Flu-Like symptoms
- Seek medical attention
- Sudden decrease in CD₄ cell count & Increase in viral load
- Fever, lymphadenopathy, pharyngitis, Upset stomach
- Rash, Sore throat, myalgia



HIV ASYMPTOMATIC

- Up to 10 to 15 years
- Patient feel better
- Symptoms are not revealed
- Virus is active, making new copies
- Lot of damage to immune system
- CDC category A: more than 500 CD₄ count



HIV SYMPTOMATIC

- ❑ CDC Category B : CD₄ cell count 200-499.
- ❑ Serious opportunistic infections
- ❑ Wasting syndrome
- ❑ Oral and skin problems



AIDS

- ▣ CDC Category C: CD₄ cell count less than 200.
- ▣ Serious opportunistic infections
- ▣ Immune system seriously damaged

CLINICAL MANIFESTATION OF AIDS

IMMUNOLOGIC:

- Low white cell counts
CD4 count < 200/mm³
- Opportunistic Infections
- Lymphadenopathy
- Fatigue

INTEGUMENTARY:

- Poor Wound Healing
- Skin Lesions
- Night Sweats

RESPIRATORY:

- Cough
- SOB

GASTROINTESTINAL:

- Diarrhea
- Weight Loss
- Nausea/Vomiting

CENTRAL NERVOUS SYSTEM:

- Confusion
- Dementia
- Headache
- Visual Changes
- Personality Changes
- Pain
- Seizures



OPPORTUNISTIC INFECTIONS:

Protozoal Infections

- Pneumocystis Carinii
Pneumonia
- Toxoplasmosis (Encephalitis)
- Cryptosporidiosis (GI)

Fungal Infections

- Candidiasis - Stomatitis
Esophagitis
Vaginal

Bacterial Infections

- Mycobacterium Complex
- Tuberculosis

Viral Infections

- Cytomegalovirus
- Herpes Simplex Virus
- Varicella-Zoster Virus

MALIGNANCIES:

- Kaposi's Sarcoma
- Non-Hodgkin's Lymphoma
- Hodgkin's Lymphoma
- Invasive Cervical
Carcinoma

AIDS DEMENTIA COMPLEX:

Cognitive, Motor and Behavioral Impairments in 70% AIDS Clients



DIAGNOSTIC MEASURES

- History Of Risk Factors
- Enzyme linked Immunosorbant Assay
- Western Blot Test
- Viral Load
- CBC,Lymhocyte Panel
- Dianostic procedures for the Organ Involved
- Neuro psychological Testing

MANAGEMENT

MANAGEMENT

Highly active anti retroviral
Therapy(HAART)

Treatment of
opportunistic Infections



EFFECTS OF HAART

- ❑ Stops viral multiplication
- ❑ Reduces viral load.
- ❑ Increases the number of CD₄ cells
- ❑ Prevents the development of AIDS.
- ❑ Prevents transmission
- ❑ Reduces the severity of complications and increases survival rates



CLASSIFICATION OF ANTI-HIV DRUGS

- Attachment inhibitors
- Nucleoside reverse transcriptase inhibitors (NRTIs)
- Non-nucleoside reverse transcriptase inhibitors (NNRTIs)
- Protease inhibitors (PIs)
- Integrase strand transfer inhibitors (INSTIs)



Nucleoside reverse-transcriptase inhibitors (NRTIs)

- ▣ *Abacavir (ABC)*
(300 mg twice daily or 600 mg once daily)
- ▣ *Emtricitabine (FTC)*
(200 mg once daily)
- ▣ *Lamivudine (3TC)*
(150 mg twice daily or 300 mg once daily)
- ▣ *Zidovudine (AZT)*
(250–300 mg twice daily)



Nucleotide reverse – transcriptase Inhibitors (NtRTLs)



▣ Tenofovir (TDF)
(300 mg once daily)



Non-nucleoside reverse-transcriptase inhibitors (NNRTIs)

- ▣ Efavirenz (EFV) (400–600 mg once daily)
- ▣ Etravirine (ETV) (200 mg twice daily)
- ▣ Nevirapine (NVP) (200 mg once daily for 14 days, followed by 200 mg twice daily)

Proteases inhibitors

- ▣ Atazanavir + ritonavir (ATV/r)
(300 mg + 100 mg once daily)
- ▣ Darunavir + ritonavir (DRV/r)
(800 mg + 100 mg once daily^a or 600 mg + 100 mg
twice daily^b)
- ▣ Lopinavir/ritonavir (LPV/r)
(400 mg/100 mg twice daily)



Integrase strand transfer inhibitors (INSTIs)

- ▣ Dolutegravir (DTG)
(50 mg once daily)
- ▣ Raltegravir (RAL)
(400 mg twice daily)



SUPPORTIVE CARE

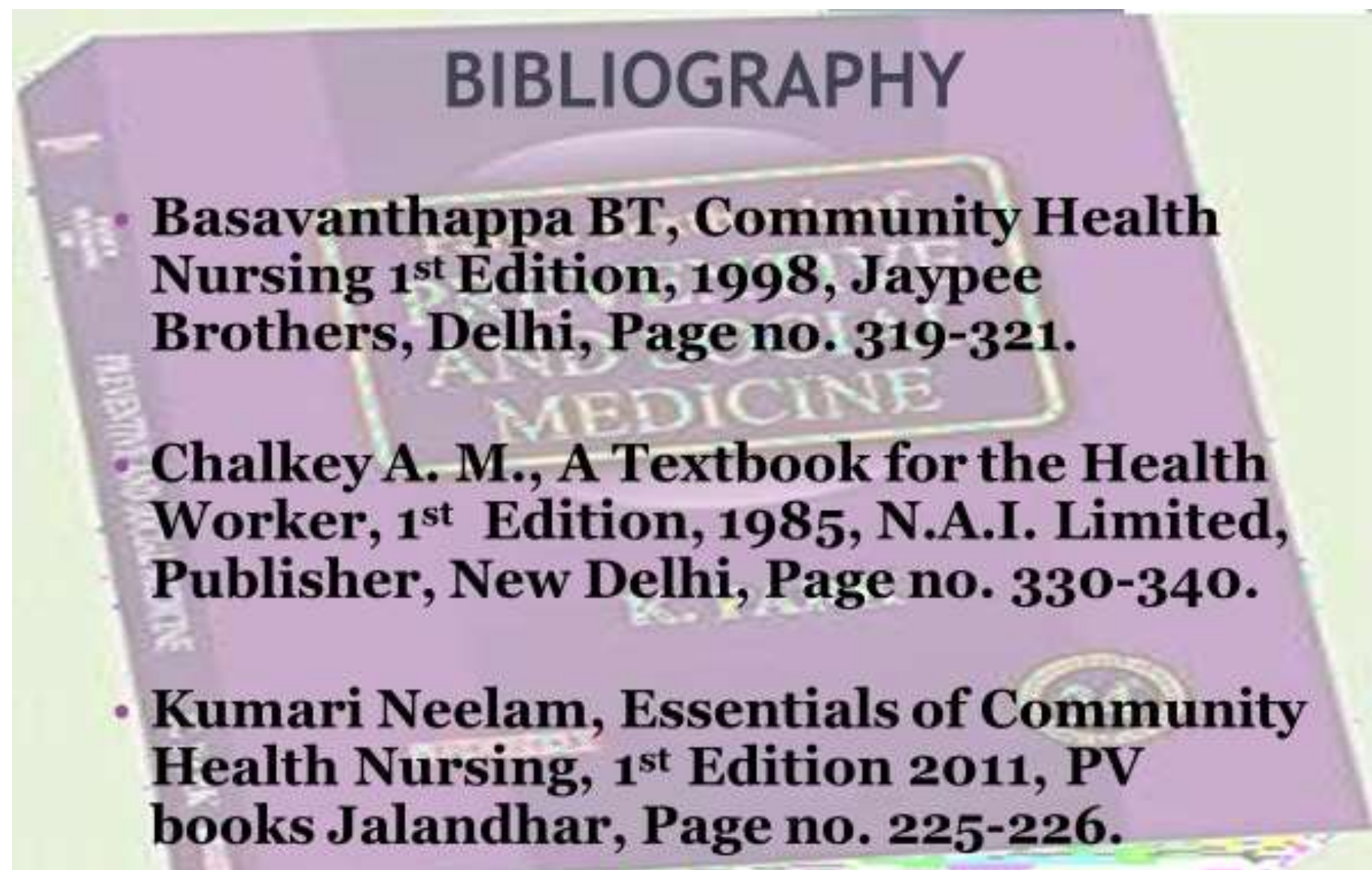
- ▣ Treatment of Reversible Illness
- ▣ Nutritional Support
- ▣ Palliation of Pain
- ▣ Psychosocial support
- ▣ Antidopaminergic Drugs

How to prevent AIDS?

Organic  Facts

- Use of condoms reduces risk of aids
 - Avoid usage of used needles & drugs
 - Intake of nutritious food helps boost immunity
 - Avoid breast-feeding by mothers who are infected
 - Avoid intercourse with multiple partners sex workers & addicted drug users
 - During pregnancy infected mother can reduce risk of transmitting virus to baby by keeping herself healthy
- 
- A large, vibrant red AIDS awareness ribbon is positioned on the right side of the slide, partially overlapping the list of prevention methods. The ribbon is tied in a classic loop and has a slight shadow, giving it a three-dimensional appearance.

REFERENCES



THANK YOU