

COVID-19 and HIV

Jacqueline M. Champlain MD
Family Medicine Physician
Austin, Texas

Presentation objectives

COVID-19 & HIV

1. Review medical evidence surrounding SARS COV-2 (CORONAVIRUS) **virology, epidemiology, diagnosis and treatment.**
1. Review medical evidence surrounding **HIV patients and their partners** in regards to SARS COV-19
1. Review **recommendations for prevention of SARS COV-19** in all persons especially those living with HIV.

— — —

Required Disclosures

CME PRESENTATION

Dr. Champlain has no relevant financial or other disclosures of interest or obligation to make in regards **to this CME TOPIC.**

However -
Dr. Champlain is a member of the diabetes speaker bureau for Novo Nordisk.

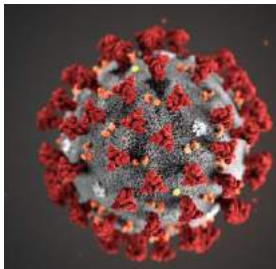
VIROLOGY REVIEW: SARS COV-2 and HIV

A TALE OF TWO VIRUSES

— — —
SARS-COV-2*, THE VIRUS THAT
CAUSES **COVID-19****

***SEVERE ACUTE RESPIRATORY
SYNDROME CORONAVIRUS 2**

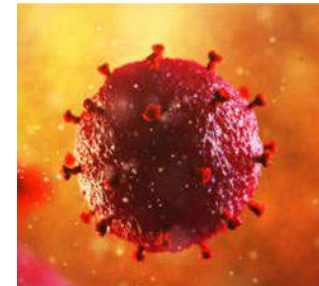
****CORONAVIRUS DISEASE OF 2019**



HIV*, THE VIRUS THAT CAUSES
AIDS**

***HUMAN IMMUNODEFICIENCY VIRUS**

****ACQUIRED IMMUNE DEFICIENCY
SYNDROME**



JUST THE BASICS: SARS COV 2 BIOLOGY

LIFECYCLE & TARGETS

TRANSMISSION

JUST THE BASICS: HIV BIOLOGY

LIFECYCLE & TARGETS

TRANSMISSION

SARS COV 2: EPIDEMIOLOGY

HIV: EPIDEMIOLOGY

DIAGNOSIS - SARS COV 19

DIAGNOSIS - HIV

DIAGNOSIS - COVID -19

DIAGNOSIS - AIDS

MEDICAL CONDITIONS HIGH RISK FOR COVID-19

To understand why certain medical conditions are high risk

First, a review of

TREATMENT for

SEVERE RESPIRATORY DISTRESS SYNDROMES (SARS)

SEPSIS (severe infection in the blood)

HYPOXIA (low blood oxygen)

HOW DOES SARS PRESENT CLINICALLY?

SURVIVING SARS

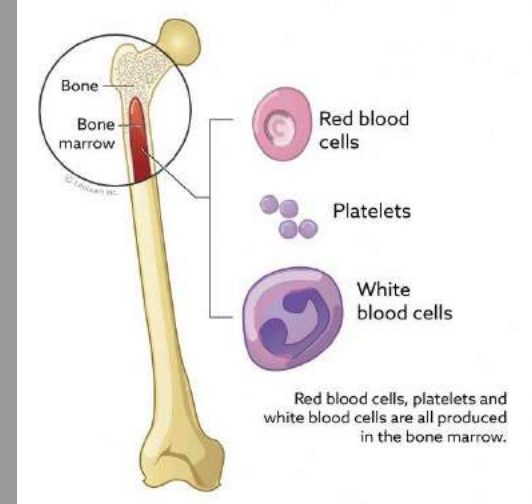
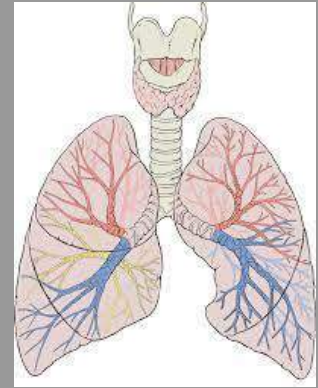
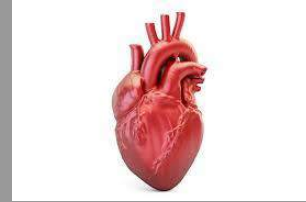
HOW DOES SEPSIS PRESENT CLINICALLY?

SURVIVING SEPSIS

ORGAN SYSTEMS NEEDED TO SURVIVE SARS or SEPSIS

1. PULMONARY (LUNGS)
2. CARDIOVASCULAR (HEART)
3. LYMPHATIC & HEMATOPOETIC (LYMPH NODES, BLOOD CELLS)
4. ENDOCRINOLOGIC (HORMONAL - ADRENALS, THYROID, PANCREAS)
5. AND MORE

ANY HEALTH
CONDITION THAT
WEAKENS THESE
SYSTEMS IS BY
DEFINITION
HIGH RISK



LIVING WITH HIV

PATIENTS LIVING WITH HIV

— — —

HIV AS A CHRONIC DISEASE

PROGRESSION TO AIDS

PREVENTION STRATEGIES

PREVENTING HIV

TRANSMISSION MECHANISM: BLOOD BORNE PATHOGEN

PREP THERAPIES (TRUVADA, DESCOVY)

POST-EXPOSURE PROPHYLAXIS

SAFER SEX (CONDOMS)

ROUTINE TESTING

TREATMENT OF OTHER STIS THAT
INCREASE RISK

NOT SHARING NEEDLES (IV OR REC USE)

PREVENTION OF NEEDLESTICKS IN HCP

HIV IS **NOT** TRANSMITTED BY:

AIR

WATER

CONTACT (TOUCH)

INSECTS OR PETS

SHARING FOOD, WATER OR TOILETS

PREVENTING SARS COV 2

TRANSMISSION MECHANISM: AIRBORNE AND DROPLET

— — —

MASK WEARING OVER NOSE AND MOUTH

AVOIDING CLOSED AND CONFINED SPACES

PROMOTING FRESH AIR FLOW

MAINTAINING 6-12 FEET OF DISTANCE
FROM OTHERS

STAY HOME WHEN SICK - IMMUNE SYSTEM
ALREADY WEAKENED

VACCINATION

LITTLE OR NO EVIDENCE OR EVIDENCE
OF HARM:

USE OF GLOVES BY NON MEDICAL
PERSONNEL

VITAMIN AND OTHER SUPPLEMENTS

IVERMECTIN

HYDROXYCHLOROQUINE

NEW IDEAS ARE FINE...BUT MUST PASS SEVERAL TESTS

HISTORY OF FAILED HIV TREATMENTS:

Herbal remedies, sex with virgins, potions to rub into the skin, chemicals like Virodene (derived from an industrial solvent), oxygen therapy and electronic zappers.

HISTORY OF FAILED COV-2 TREATMENTS:

Ivermectin -

Hydroxychloroquine -

HOW DOES THE VACCINE WORK?

BUT FIRST, mRNA

What does mRNA normally do?

— — —

mRNA basics

How does it work for a vaccine?

A tale of two vaccines

mRNA vaccines: pfizer & moderna

Adenovirus vaccine: johnson &
johnson, janssen

Vaccine development - an easy job?

Initial stages

Final stages

Risk analysis - automobile safety

Risk of seatbelts

Risk of not wearing seatbelts

Risk analysis - HIV & AIDS

Risk of anti-retrovirals

Risks of HIV, and AIDS

Risk analysis - COVID-19 vaccines and disease

Risks of vaccine

Risks of disease

**YOU CAN STILL GET THE
VIRUS IF YOU'VE HAD
THE VACCINE.**

What are we playing
for then?

Treatment of COVID-19 INPATIENT and OUTPATIENT

Inpatient treatment

WELCOME TO: THE ER, GENERAL MEDICINE FLOORS, INTENSIVE CARE UNITS,
REHAB UNITS AND SKILLED NURSING FACILITIES

A WHOLE NEW WORLD

— — —

EMERGENCY CARE

INPATIENT FLOOR & ICU CARE

RISKS OF HOSPITALIZATION...ANYWAY

— — —

SHORT TERM

LONG TERM

CONFOUNDING FACTORS

Patients sick enough to go to the ER or be ADMITTED are already very ill.

Hospital care and outcomes vary depending on urban, suburban, or rural locations.

Teaching and non-teaching hospitals have different outcomes.

Physician lead (MD, DO) care vs. non-physician lead care (PA, NP) has different outcomes.

Nurse to patient ratios can affect patient care on all levels, including acute care and at time of discharge.

Socioeconomic factors including health literacy also affect long and short term outcomes.

OUTPATIENT treatment

Treatment at your community clinics and rest at home

Criteria for outpatient infusion therapy

— — —

Duration of infection PLUS

PRE-existing conditions

Benefits of treatment at home

SUMMARY

COVID-19 AND HIV

HIV IS THE VIRUS THAT CAUSES AIDS.

TRANSMISSION IS BLOOD BORNE.

SARS COV-2 IS THE VIRUS THAT CAUSES COVID-19.

TRANSMISSION IS DROPLET AND AIRBORNE.



SUMMARY

COVID-19 AND HIV

PREVENT DISEASE SEVERE ENOUGH
TO GO TO ER OR TO HOSPITAL

AVOID TRANSMISSION TO
SUSCEPTIBLE PERSONS

DECREASE DISSEMINATION OF
MISINFORMATION ABOUT HIV,
AIDS, SARS-COV-2 OR COVID-19

CONTINUE PREVENTATIVE CARE
SERVICES AND SCREENINGS

SUMMARY

COVID-19 AND HIV

KEEP IMMUNE SYSTEM STRONG IN ALL PATIENTS

HEALTHY DIET, EXERCISE

FRESH AIR, GOOD MENTAL HEALTH

UPDATE ALL VACCINES NEEDED

MSM: HEPATITIS A/B

EVERYONE: FLU,
PNEUMONIA



REFERENCES

questions