

2. Bacteriology

10

3. Virology

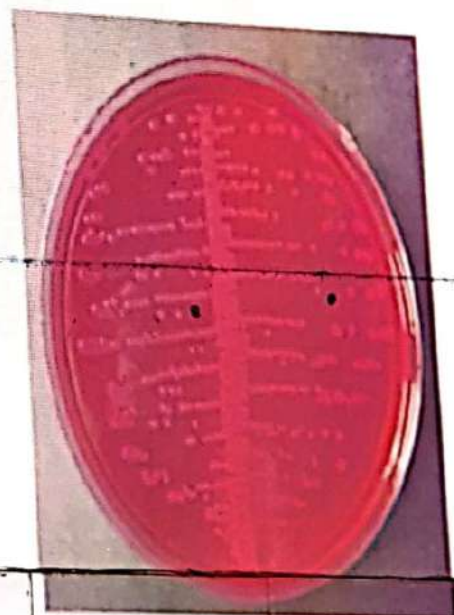
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Q1

(2 + 2 + 3 + 2 + 1 = 10 marks)

A 25 year old lady presented with symptoms of dysuria, and fever with chills. Urine was sent for culture and sensitivity. Culture plate with growth is kept here.

1. Identify the culture medium used and describe the colonies.
2. Mention 4 common organisms causing UTI
3. What is significant bacteriuria? State the clinical significance
4. What are the common predisposing causes?



5. Enumerate Two antibiotics commonly used for treatment

1. MacConkey agar - flat pink lactose fermenting colonies

2. E.coli, klebsiella pneumonia, proteus species, enterococcus

3. A count of $\geq 10^5$ colony forming units / ml of urine is significant bacteriuria
-it indicates infection of urinary tract.

4. Gender (females > males)

-Age (increases with age)

-pregnancy

-structural & functional abnormality of UT.

-vesicoureteral reflex

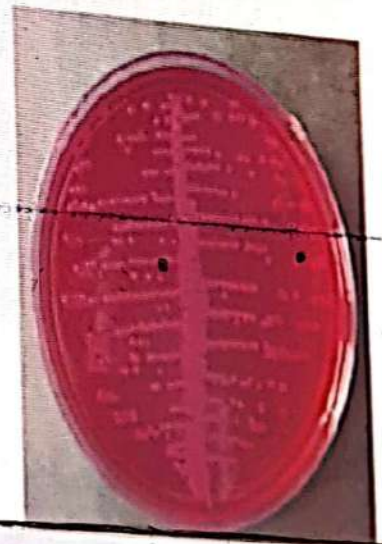
-genetic factors

5. Norfloxacin, Cephalosporin

Q2
(2+2+3+1+2)

A 24yr old pregnant woman admitted with complaints of fever and increased frequency of micturition. Culture plate of urine sample is kept here.

1. Identify the culture medium used and describe the colonies
2. Name 4 organisms causing UTI
3. What is asymptomatic bacteriuria? State the clinical significance
4. What are the common predisposing causes for this disease?
5. Which are the antibiotics that can be given safely in this case?



3.It refers to isolation of specified quantitative count of bacteria in an appropriately collected urine obtained from a person without symptoms of UTI.

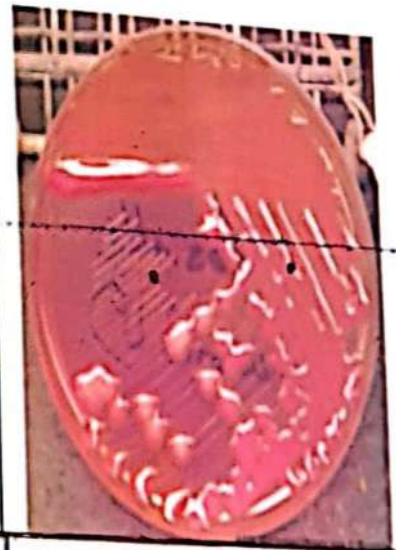
~ clinically significant in case of pregnant woman, people undergoing prostatic surgery, or any urologic surgery where bleeding is anticipated.

5.cephalosporin, ampicillin

Q3
(2 + 2+2+2+2 =10 marks)

A 60 year old male patient having CVA, on urinary catheter for last 10 days now developed high grade fever and chills. Culture of the urine sample from this patient is kept here

1. Comment on the bacterial growth given and the culture media used
2. Name two common predisposing condition for UTI in adults
3. Name Four bacteria causing hospital acquired UTI
4. Write Two most appropriate antibiotics that can be used for treating a MDR strain of this bacteria



5. What is sterile Pyuria? Name one condition causing sterile pyuria			
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1. MacConkey agar-
~ culture shows mucoid pink lactose fermenting colonies.

2. -Pregnancy

-structural abnormalities- ureteric stone, BPH, urethral stricture.

- functional abnormalities-neurogenic bladder

- vesicoureteral reflex

3. -E.coli

-klebsiella

-pseudomonas

-acinetobacter

4. -Carbapenem (meropenem)

- b-lactam/b-lactamase inhibitor

combination (eg; piperacilline-tazobactam)

5. Presence of pus cells in urine, but negative routine bacterial urine culture.

• renal tuberculosis

Q4.

(1+2+2+2+2+1= 10 marks)

Mother of a 3 days old preterm baby complains that the baby is not active and sucking well. There is a history of premature rupture of membrane. Gram stained smear of CSF sample is focused.

1. What is your clinical diagnosis
2. Comment on the Gram smear focused.
3. Specify Two samples to be collected for diagnosis of this case
4. Name Two common agents causing this condition
5. Name Two drugs used to treat this condition
6. List Two complications that can happen on improper treatment of such a case



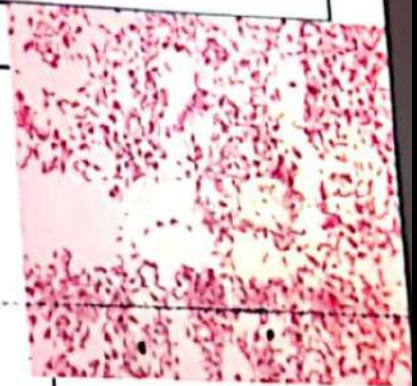
1. Neonatal meningitis
2. Smear shows gram Positive cocci arranged in chains in between pus cells.
3. CSF , blood
4.
 - Streptococcus agalactia
 - E.coli
 - klebsiella.
5.
 - IV ampicillin+gentamicin
 - IV dexamethasone (to reduce ICT)
6. Meningoencephalitis
 - seizures,stroke
 - hydrocephalus.

Q5

(1+2+2+2+2+1= 10 marks).

Mother of a 3 days old preterm baby complains that the baby is not active and sucking well. There is a history of premature rupture of membrane. Culture of CSF sample yield this organism

1. What is your diagnosis
2. Comment on the Gram smear focused.
3. Specify Two samples to be collected for diagnosis of this case
4. Name **Two common** agents causing this condition
5. Name Two drugs used to treat this condition
6. List Two complications that can happen on improper treatment of such a case

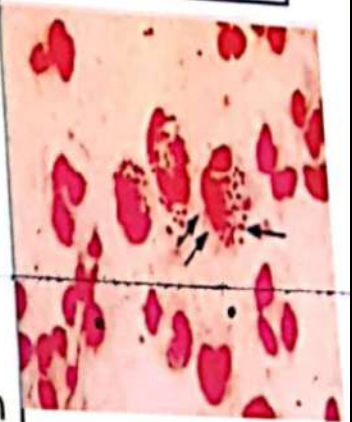


Q 6

(2+1 ½ +2+2+1 +1 ½ = 10 marks.)

A 7 year old girl was admitted with high fever, head ache, vomiting, seizure and altered mental status. She has petechial rashes all over the body. Gram stained smear of CSF is focused here

1. Comment on the Gram smear
2. Name the 3 primary agents of bacterial meningitis
3. Mention the other samples to be collected in this case
4. Mention the most appropriate drug treatment for this condition
5. Name Two chemoprophylactic drugs used
6. Comment on vaccine for this disease



Petechial rashes- meningococcal meningitis

1. Smear shows intracellular gram negative half moon shaped diplococci.

2. Streptococcus pneumoniae

- neisseria meningitidis

- streptococcus agalactiae

- hemophilus influenzae

- listeria.

3.Blood

4. Ceftriaxone / cefotaxime (for 7 days)

5. Ceftriaxone, rifampicin / ciprofloxacin

6.Meningococcal polysaccharide vaccine-
either bivalent / quadrivalent.

- schedule:

- children of 3-18 months of age: 2 doses, 2-3 months gap.

- Older children/adult : single dose.

- Efficacy: >95% , duration : 3-5 yrs.

Q7

(2+2+4+2+1=10 marks)

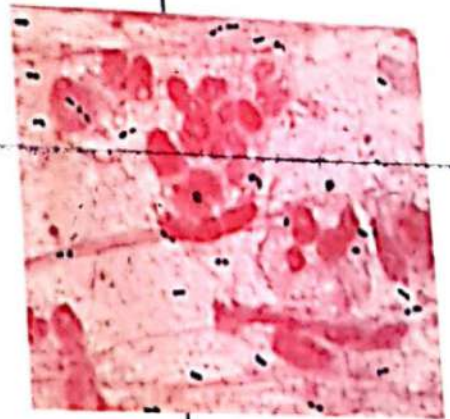
A 55 year old male patient presented to Medicine casualty with high grade fever, head ache and neck rigidity. Elicited history of splenectomy one year back. CSF analysis showed elevated CSF protein and low sugar, with predominant neutrophils. Gram stain picture is focused.

1. Interpret the smear and comment on the causative agent

2. List two common predisposing conditions for this case

3. Comment on the types of available vaccines and immunisation schedule

4. Name Two other diseases caused by this bacteria



5. Name the 3 primary agents of bacterial meningitis

1. smear shows gram positive diplococci with lanceolate appearance along with pus cells - most probably streptococcus pneumonia

2. Splenectomy, age (children <2 yr high risk), DM, alcoholism, immunosuppression.

3.- Pneumococcal polysaccharide vaccine (PPSV23)

Schedule: age ≥ 65 yr-

Age 19-64 yrs with underlying risk factors

- pneumococcal conjugate vaccine (PCV13)

Schedule: after birth - 6, 10, 14 th week

Booster at 15 months

4. Lobar Pneumonia, otitis media

5. Streptococcus pneumoniae, neisseria meningitidis, streptococcus agalactiae, hemophilus influenzae, listeria.

Q 8

(2+2+2+2+2=10 marks)

A 30 year old male working in Chennai presented with history of fever of one week duration. On examination patient was febrile with relative bradycardia and mild splenomegaly. Growth obtained from Blood culture is kept.

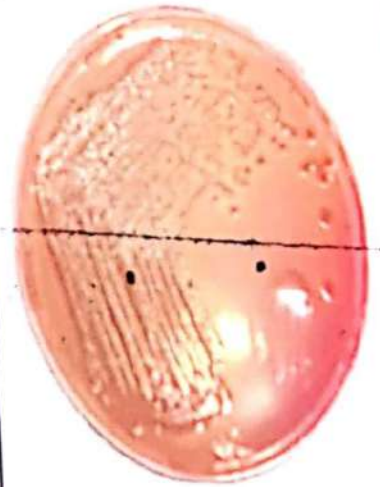
1. Identify the medium and characteristics of the growth obtained

2. Mention the gold standard diagnostic test for this disease

3. Name the serological test used for diagnosing this disease and write the significant antibody titers

~~4. Name the drugs which can be used to treat this case and write the Drug of choice~~

5. Mention **TWO** major complications of this condition



1 week fever, bradycardia, splenomegaly = typhoid fever

1. MacConkey agar
culture shows non lactose fermenting,
pale, translucent colonies.

2. Blood culture

3. Widal test

- H agglutinin titre > 200
- O agglutinin titre > 100

4. 3rd gen cephalosporins- DOC: ceftriaxone
-azithromycin, ciprofloxacin

5. GI bleeding

- intestinal perforation
- Cerebellar ataxia

Q 9

(2 + 2 + 1 + 3 + 2 = 10 marks)

A 20 year old male student studying in Tamilnadu presented to medicine outpatient department with fever of 10 days duration. On examination patient was febrile with bradycardia and mild splenomegaly. The given test was performed.

1. Identify the test and mention the type of Antigen Antibody reaction
2. Write the significant titre of each type of antibody
3. What is the best diagnostic test to diagnose this disease.
4. List the situations where you can get false positive and false negative results with this test, stating reasons
5. Write a note on prevention of this disease

1. Widal test

- tube agglutination reaction

2. - H agglutinin titre > 200

- O agglutinin titre >100

3. blood culture

4. False +ve :

- ~anamnestic response : in dengue / malarial infection who have had prior enteric fever.

- ~person with prior immunization

- ~person with inapparent infection

- ~if bacterial antigen suspension are not free from fimbriae

False negative:

- ~early stage (1st week of illness)

- ~ late stage (after 4 week)

- ~carriers

- ~patients on antibiotic

5. a) control reservoir

- ~ control of case -by early detection & effective treatment, disinfection

- ~ control of carriers

b) sanitation measures:

- ~ protection & purification of drinking water supplies
- ~ promotion of food hygiene
- ~ hand washing
- ~ improvement of basic sanitation

c) vaccine:

- ~ Vi antigen capsular polysaccharide vaccine
- ~ Typhoral vaccine
- ~ Parenteral TAB vaccine

Q 10
(2+2+1+2+3 =10 marks)

A 25 year old lactating mother is admitted in surgery ward with pain and swelling in right breast. Culture and direct microscopy of the aspirated sample are kept. Interpret the Gram smear and the culture provided

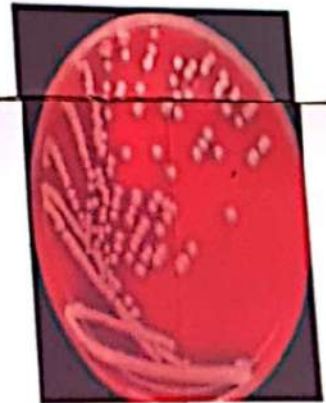
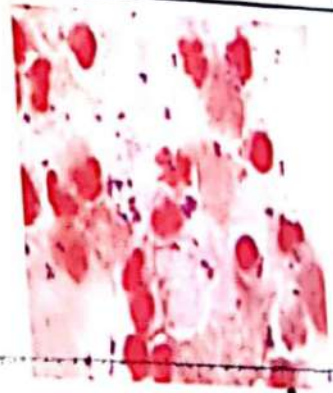
1. What is the aetiological diagnosis of this case describing the direct smear and growth obtained

2. Name four other infections produced by this organism

3. Name the test done to identify the pathogenic species

4. Name Two drugs which can be used for the most appropriate treatment of this particular case

5. What is meant by MRSA, write the method of laboratory detection of MRSA



1. Smear shows gram +ve cocci arranged in clusters with pus cells
~ blood agar culture shows beta- hemolytic colonies
~ etiology : staph. aureus infection

2. -Folliculitis
-infective endocarditis
-food poisoning
-osteomyelitis

3. coagulase test

4. Dicloxacillin, nafcillin, cephazolin

5. methicilline resistant staph. aureus:

~ Penicillin binding protein(PBP) in bacteria is essential for their cell wall synthesis.
~beta-lactam antibiotics act by inhibiting PBP
~in MRSA strain of bacteria , mecA gene alters PBP to PBP2a
~beta lactams have less affinity to PBP2a.
~so resistance to antibiotics occur.

Detection of MRSA:

~antimicrobial susceptibility test using cefoxitin/oxacillin disk.
~latex agglutination test- detect PBP2a
~PCR - detect mecA gene

Q 11

(2+2+1+2+1+2 =10 marks)

10 year old girl complains of diarrhea with blood and mucus of 2 days duration. She gave history of having fruit juice from beach on the previous day. Stool culture yields *Shigella* species

1. Enumerate the pathogenic species and mention the infective dose?
2. What is its pathogenic mechanism and the reason for bloody stools
3. List the expected complication of shigella infection
- 4 . Name two other bacteria causing similar clinical presentation
5. Comment on the treatment of this case

6. What are the general prophylactic measures?					
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1. -*S.dysenteriae*

-*S.flexneri*

-*S.boydii*

-*S.sonnei*

~ infective dose: 10-100 bacilli

2.

Pathogenesis

Shigella is one of the important cause of bacillary dysentery.

- ❑ **Mode of transmission:** Infection occurs by ingestion through contaminated fingers (most common), food, and water or rarely flies. It can also be transmitted sexually (homosexuals)
- ❑ **Minimum infective dose:** As low as 10–100 bacilli are capable of initiating the disease, probably because of their ability to survive in gastric acidity
- ❑ **Entry via M cell:** Bacilli enter the mucosa via M cells and are then engulfed by macrophages. Subsequently, the macrophages release the bacilli, which induce the recruitment of inflammatory cells to the infected site releasing cytokines which in turn cause acute colitis—the hallmark of shigellosis
- ❑ Invasion is determined by a **large virulence plasmid**, which codes for important virulence factors such as **ipa proteins** and **type III secretion system**
- ❑ **Direct cell-to-cell spread:** *Shigellae* spread directly from one host cell to the other by inducing actin polymerization of host cells, mediated by **IcsA** proteins
- ❑ **Exotoxins:** Some serotypes of *Shigella* also produce enterotoxins.
 - ***Shigella* enterotoxin (ShET):** It is structurally similar to cholera toxin and is found essentially in *S. flexneri 2a*
 - **Shiga toxin:** It is a cytotoxin, produced by *S. dysenteriae* type 1. It is structurally and functionally similar to verocytotoxin of EHEC. It inhibits protein synthesis by inhibiting 60S ribosome. It enhances local vascular damage of intestine as well as internal organs, such as kidney and brain.
- ❑ **Endotoxin:** It acts similar to any other gram-negative endotoxin and induces intestinal inflammation and ulcerations.

3. Complications:

- **Intestinal** complications such as toxic megacolon, perforations and rectal prolapse
- **Metabolic** complications, such as hypoglycemia, hyponatremia, and dehydration
- **Ekiri syndrome** or toxic encephalopathy: It is a metabolic complication of shigellosis; manifests as altered consciousness, seizures, delirium, abnormal posturing and cerebral edema

4. -Enterohemorrhagic E.coli

- campylobacter jejuni

5. -DOC: ciprofloxacin (3 days)

-ORS

-alternatives: ceftriaxone, azithromycin.

6. -hand hygiene : after handling childrens feces & before handling food.

-stool decontamination

-PPEs : Gloves & gown

-equipments: single use patient dedicated equipments

-patient placement: single isolation room with a bathroom facility / cohorting.

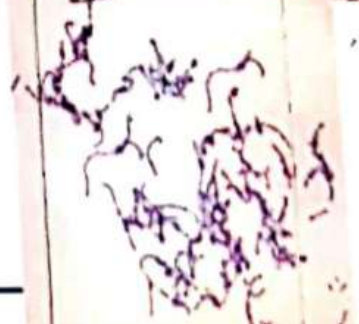
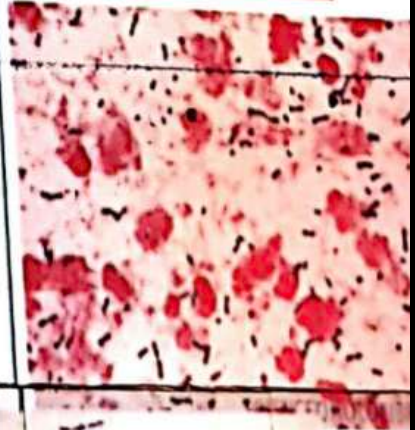
- transfer of patient: limited

- disinfection of room: frequent cleaning & adequate disinfection.

Q 12
(3+2+2+1+2 = 10 marks)

8 year old boy presented to pediatric outpatient department with history of fever and dysphagia. Examination revealed abscess in the peritonsillar region. An aspirated sample was sent to microbiology lab for culture and sensitivity. Gram smear of aspirate is focused

1. Comment on the Gram smear with inference
2. What are the other diseases (two) caused by this organism.
3. What are the non suppurative complications caused by this organism?
4. Name one test to differentiate staphylococci from streptococci.
5. What is the drug of choice for this condition?



1. Smear shows gram +ve cocci in chains with pus cells- probably strept. Species.

2. impetigo, cellulitis

3. -Acute rheumatic fever

-acute glomerulonephritis

-guttate psoriasis

- reactive arthritis

-PANDAS

4. Catalase test (strept : negative)

5.DOC: penicillin

If allergic to penicillin : erythromycin

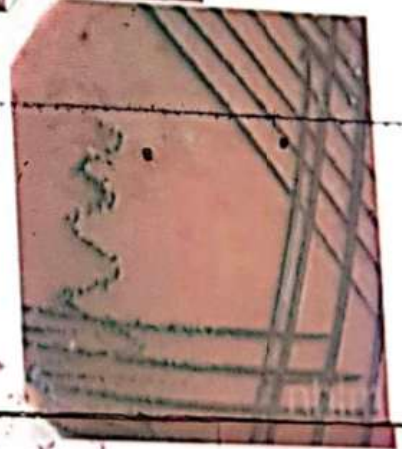
Q 13

(3+2+2+1+2=10 marks)

A 10 year old unimmunized child presented to pediatric OPD with fever and swelling of neck. Clinical examination revealed white patch on pharynx. Throat swab culture and smear from culture are focused.



1. Interpret the culture and smear kept and write the aetiological diagnosis
2. Name **TWO** special staining techniques to demonstrate this bacteria
3. Describe the toxin and the mechanism of action
4. Name **TWO** systemic complications
5. Write down the prophylaxis



1. Smear: club shaped gram +ve bacilli arranged in chinese letter/ cuneiform arrangement.

~Culture :potassium tellurite agar shows black colonies

~probably *Corynebacterium diphtheriae*

2. Albert stain

Gram staining

3.

- ❖ Toxin is a polypeptide chain, comprises of two fragments—A (active) and B (binding)
- ❖ Fragment B binds to the host cell receptors (such as epidermal growth factor) and helps in entry of fragment A
- ❖ Fragment A gets internalized into the cell and then acts by the mechanism given below.

Mechanism of Diphtheria Toxin (DT)

- ❑ Fragment A is the active fragment, which causes ADP ribosylation of elongation factor 2 (EF-2) → leads to inhibition of EF-2 → leads to inhibition of translation step of protein synthesis
- ❑ Exotoxin A of *Pseudomonas* has a similar mechanism like that of DT.

4. Polyneuropathy, myocarditis

5. a) infection control measures: isolation, droplet precautions

b) post exposure prophylaxis:

Booster dose of diphtheria +penicillinG/
erythromycin [7-10 days]

c) vaccination:

-Single vaccine: DT

-combined :DPT, DaPT, Td, pentavalent

Q 14

(3+2+3+2=10 marks)

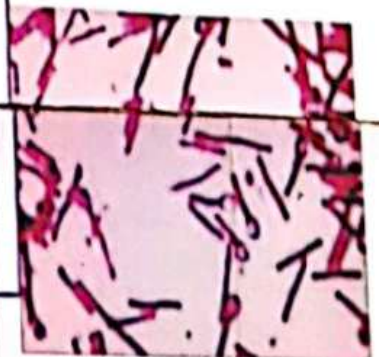
A 10 year old unimmunized boy presented with excitability and painful body spasm. Parents gave history of deep seated injury one week back. You are provided with smear and culture of excised tissue.

1. Comment on the culture and the smear focused and write your diagnosis.

2. Write the pathogenesis of this disease

3. How will you manage this patient?

4. How could you have prevented this disease in this child?



1. RCM broth :Culture shows black meat particles due to proteolysis & produce foul odour.

~ smear shows gram +ve bacilli with terminal and round spores (drumstick appearance)

Diagnosis: tetanus (agent- clostridium tetani)

2. tetanus toxin (tetanospasmin)

Mechanism of Action of Tetanus Toxin

Tetanus toxin binds to receptors (polysialogangliosides) present on motor nerve terminals which results in toxin internalization.

- ❑ Following internalization, tetanus toxin gets transported in retrograde way to the gamma-aminobutyric acid (GABA) and glycine producing inhibitory neuron terminals
- ❑ The toxin prevents the presynaptic release of inhibitory neurotransmitters glycine and GABA, which leads to spastic muscle contraction.

3. a) Tetanus immunoglobulin

- In non immunised individual :combined immunization.

~Immunise with 1st dose of tetanus toxoid (TT) vaccine in one arm

~administration of ATS or HTIG in another arm

~followed by a complete course of TT vaccine.

b) antibiotics : metronidazole (6-7 days)

Alternative : penicillin / doxycycline

c) other measures :

~ symptomatic Tx :endotracheal intubation

Early tracheostomy

Anti spasmodics

Beta blockers

~surgical debridement

~ patient isolation-noxious stimuli aggravates spasm.

4. For 10 yr ,

Td complete dose [0,1month,1 year] + HTIG

Q 15

(1+2+1+2+2+2=10 marks)

An intern presents with fever, myalgia, sore throat and loss of sense of smell since 1 day. He was on duty in the casualty in the previous week.

1. What is the most probable diagnosis?
2. Mention the receptor of this virus and the expected complications with probable reasons
3. What are the specimens to be collected for the diagnosis of this condition?
4. Mention TWO most commonly used methods for the diagnosis?
5. What are the infection control measures for disease prevention?
6. Describe the immunoprophylaxis

1. Covid 19
2. ACE-2 receptor
 - pneumonia
 - myocarditis
 - ARDS
 - septic shock
 - multiorgan failure- cytokine induced damage

3. Preferred specimen: throat swab
Nasopharyngeal swab
Alternative : bronchoalveolar lavage
Endotracheal aspirate
Nasopharyngeal aspirate

4. Real time RT-PCR ,
antigen detection: point-of-care test

5. Refer Page: 670

- 6.vaccines:

- ~ inactivated / weakened virus vaccine: Covaxin
- ~protein based: Epi Vac Corona
- ~viral vector vaccine: covishield, sputnikV
- ~RNA & DNA vaccine: Pfizer-BioNtech, Moderna

Drugs:

- ~pre EP :Tixagevimab
- ~post EP:casirivimab

5. IPC measures at health care facility

- a) Hand hygiene
- b) PPE
 - ~ HCW giving care to covid19 suspects: 3 ply mask, glove, gown, face shield
 - ~ HCW working in non covid areas: 3 ply mask
 - ~ anyone entering into a health care facility: face mask- cloth/fabric
- c) environmental cleaning
 - ~ floor & surface; detergent & 0.5% sodium hypochlorite.
 - ~ cleaning of patient care items
 - ~ high touch surfaces
 - ~ terminal disinfection- after discharge
- d) respiratory hygiene & cough etiquette
- e) BMW management
- f) Laundry

IPC measures for general public

- a) hand wash
- b) social distancing
- c) environmental cleaning
- d) cloth masks

Measures by government

- a) quarantine
- b) lock down
- c) cluster containment strategy- containment zone

Q 16

1+3+4+2 =10 marks)

A 10 year old boy was brought to the casualty with a lacerated wound on the face. The parents gave a history of dog bite.

1. What are the first aid measures?
2. List the non neural vaccines and immunoglobulins available.
3. Write the post exposure prophylaxis, with mode of administration and with schedule for this child.
4. Comment on the communication and counseling you are supposed to provide to the parents.

1.

- ❖ **Physical cleansing:** All bite wounds and scratches should be washed thoroughly with soap and water for 15 minutes
- ❖ **Chemical inactivation:** Antiseptics such as povidone iodine or alcohol can be used to inactivate the residual viruses
- ❖ **Suturing:** Suturing causes local tissue damage, which may help in spreading of the virus. Therefore, suturing should be avoided. Deeper wounds that definitely require suturing should be sutured loosely and only after RIG is infiltrated into the wound
- ❖ **Other general measures** include: (i) debridement of devitalized tissues, (ii) tetanus prophylaxis, (iii) antibiotic treatment to prevent secondary bacterial infection
- ❖ Do not touch the wound(s) with bare hand
- ❖ Do not apply irritants like soil, oil, lime, herbs, chalk, betel leaves, etc.

2. Non-neural vaccines:

- ~purified chick embryo cell (PCEC) vaccine
- ~purified vero cell (PVC) vaccine
- ~human diploid cell (HDC) vaccine

Rabies Immunoglobulin(RIG):

- ~human RIG
- ~equine RIG

3. ~wound management

~RIG: administered only once, as soon as possible & not beyond day 7 after 1st dose of vaccine.

~ it should be infiltrated as much as possible into the wound

~ Rabies vaccine: ID or IM

ID : 0.1 ml - 2 sites - 0,3,7 days

IM : 1 ml - total 4 doses , 2 schedules

- 1 site IM vaccine: days 0,3,7& b/w 14 -28

- 2 site IM vaccine on day 0 & 1 site IM on day 7 & 21.

4.observe dog for 10 days

-Patient should be isolated in a quiet room,protected from external stimuli

-do not touch the wound with bare hand

Q 17

(1+4+3+1+1 = 10 marks)

A 30 year old male presents with fever, head ache and myalgia. His platelet count is less than 50000. A provisional clinical diagnosis of Dengue fever is made

Answer the following

1. What is the mode of transmission
2. Enumerate the complications and pathogenesis
3. Mention the commonly used serological diagnostic tests and the markers detected
4. Name two other differential diagnosis
5. Add a note on prevention

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1. Vector borne (bite of aedes mosquitoes infected with the dengue virus)
- 2.

Antibody Response Against Dengue Virus

Infection with dengue virus induces the production of both neutralizing and non-neutralizing antibodies.

- ❑ The **neutralizing antibodies** are protective in nature. Such antibodies are produced against the infective serotype (which last lifelong) as well as against other serotypes (which last for some time). Hence, protection to infective serotype stays lifelong but cross protection to other serotypes diminishes over few months
- ❑ The **non-neutralizing antibodies** last lifelong and are heterotypic in nature; i.e. they are produced against other serotypes but not against the infective serotype
 - Such antibodies produced following the first serotype infection, can bind to a second serotype during secondary dengue infection; but instead of neutralizing the second serotype, it protects it from host immune system by inhibiting the bystander B cell activation against the second serotype
 - **ADE:** The above phenomena is called **antibody dependent enhancement (ADE)**. Non-neutralizing antibodies promote recruitment of mononuclear cells followed by release of cytokines which explains the reason behind the severity of secondary dengue infection
 - Among all the serotypes combinations, ADE is remarkably observed when serotype 1 infection is followed by serotype 2, which also claims to be the most severe form of dengue infection.

2. **Dengue hemorrhagic fever (DHF):** It is characterized by:
- High-grade continuous fever
 - Hepatomegaly
 - Thrombocytopenia (platelet count $< 1 \text{ Lakh/mm}^3$)
 - Raised hematocrit (packed cell volume) by 20%
 - Evidence of hemorrhages which can be detected by:
 - ◆ Positive tourniquet test (>20 petechial spots per square inch area in cubital fossa)
 - ◆ Spontaneous bleeding from skin, nose, mouth and gums.
3. **Dengue shock syndrome (DSS):** Here, all the above criteria of DHF are present, and in addition manifestations of shock are present, such as:
- Rapid and weak pulse
 - Narrow pulse pressure ($<20 \text{ mm Hg}$) or hypotension
 - Presence of cold and clammy skin
 - Restlessness.
3. ~NS1 antigen detection by ELISA & ICT
~antibody detection :
 - MAC - ELISA
 - ICT
 - neutralization tests - plaque reduction test, microneutralization.
4. Chikungunya ,kyasanur forest disease.

5. Vaccine

~ chimeric yellow fever dengue live attenuated tetravalent vaccine (CYD-TDV)

-Schedule: 3 injections - 6 months gap
0.5 ml subcutaneously

~ mosquito control measures:

-use of larvicide : mineral oil / paris green

-reduce mosquito breeding sites

-biological larvicides: *Gambusia affinis* fish

Bacillus thuringiensis

-residual spraying: DDT, Malathion

-individual protection : bed nets,

repellents

Protective clothing

- space application of pesticides

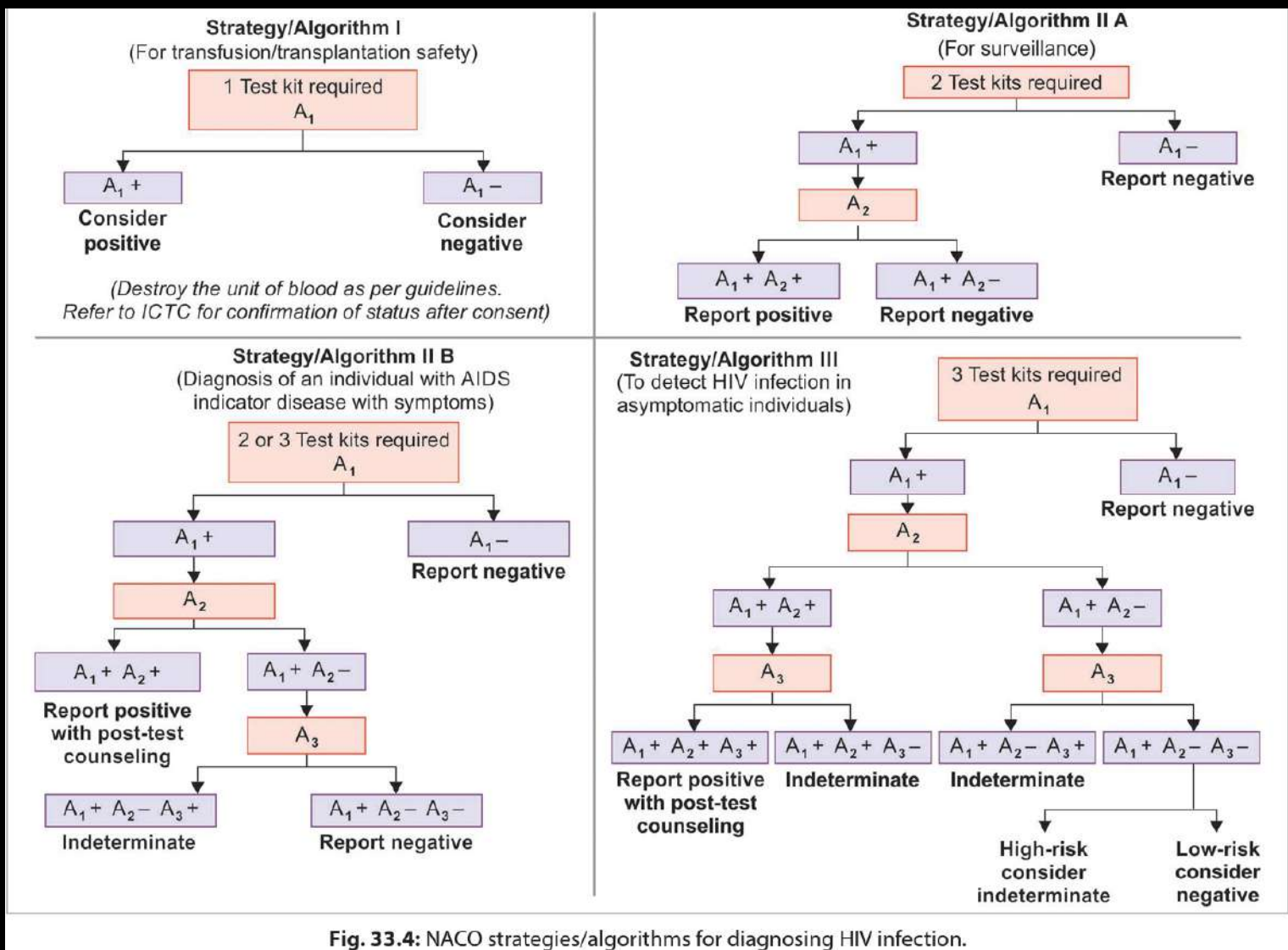
Q 18

(1+2+2+3+2 =10 marks)

A 35 year old male homosexual complains of fever of 1 month duration, diarrhoea, weight loss with extensive fungal skin lesions. On examination, he has pallor, hepatosplenomegaly and generalised lymphadenopathy.

1. What is the most probable diagnosis?
2. What are the routes of transmission
3. What is meant by Window period
4. According to NAACO guidelines, what is the diagnostic strategy applied in ICTC
5. Name Two common opportunistic infections seen in these patients

1. HIV infection
2. -Sexual mode
 - blood transfusion
 - per cutaneous/ mucosal
 - perinatal mode
3. Window period : initial time interval between exposure & appearance of detectable antibodies in the serum.
- 4.



5. Candidiasis , pneumocystis jiroveci , toxoplasmosis