

Menenjit

KOMISYON SANTE JEACHA

ENVITE: EDINY DOUYON

MEDSEN- EKONOMIS





Questions ?

Kisa ou konnen de Menenjit?

- A- Se yon maladi enfektyez ki grav anpil.
- B- Mwen tande pale de li, men mwen pa pote atansyon.
- C- Se yon maladi ki pa grav.
- D- Mwen gen pwòch, zanmi ou fanmi ki te pase maladi a deja.
- E- Se premye fwa mwen tande pale de maladi sa.

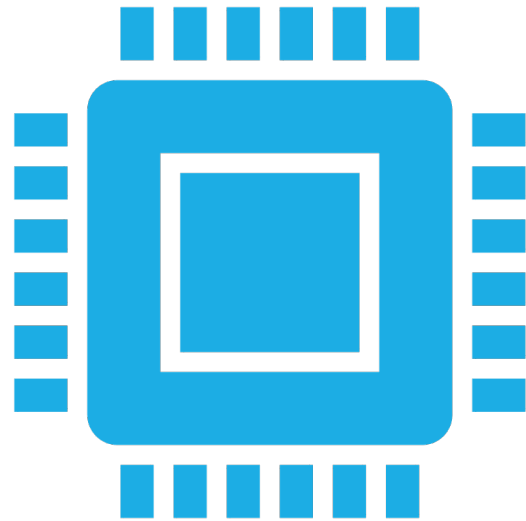
1. Entwodiksyon



Entwodiksyon jeneral sou menenjit

- Menenjit se yon enfeksyon grav ki touche manbràn ki vlope sèvo ak mwèl epinyè.
- Li ka koze pa viris, bakteri, oswa fong.
- Si li pa trete nan on tan ki kout, li ka mennen nan konplikasyon grav, menm lanmò.

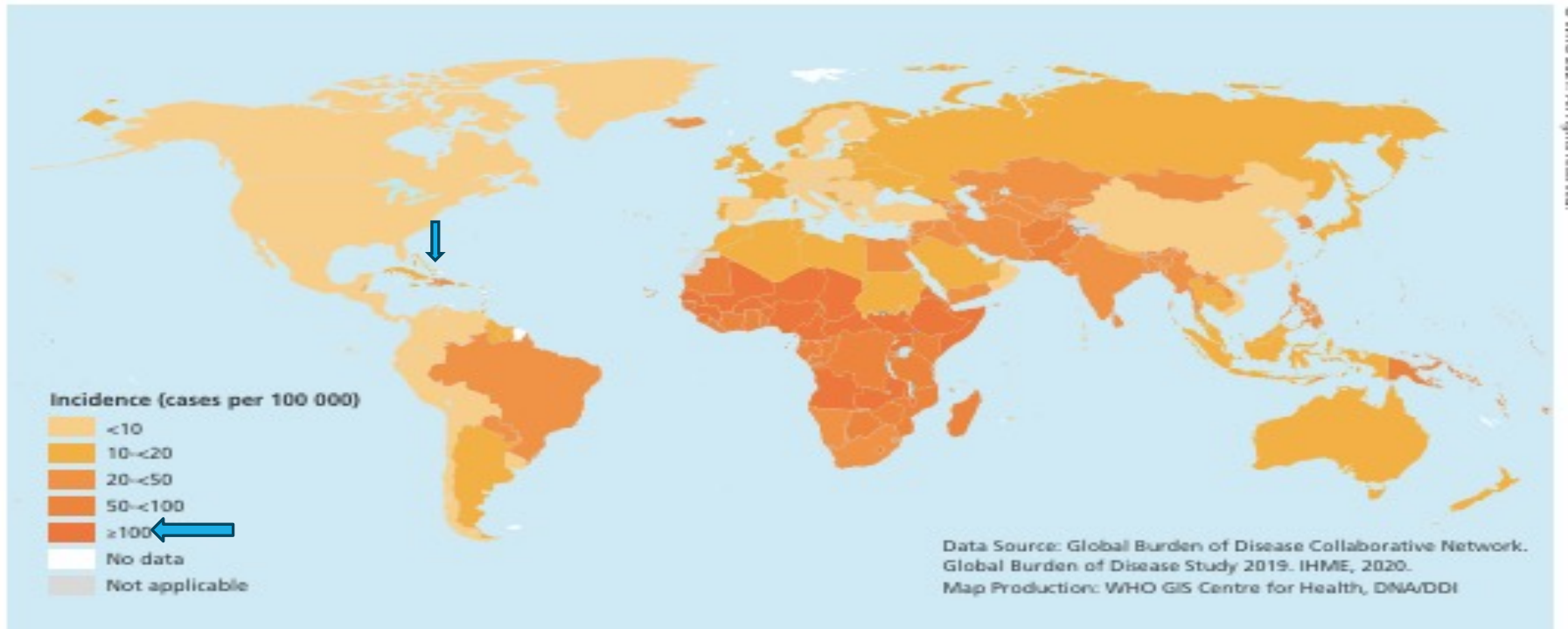
2. Enpak maladi a nan mond lan ak Ayiti



- Apeprè 2,5 milyon ka menenjit chak ane nan mond lan.
- An Ayiti, menenjit sou-diagnostike akòz aksè limite nan swen.
- Timoun yo ak moun ki gen sistèm iminitè ki febli yo plis an danje.

3.Ensidans bò kote OMS

Fig. 1. Incidence rates of all-cause meningitis per 100 000 population by country in 2017



The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Vision

→ Towards a world free of meningitis

Our collective vision is "Towards a world free of meningitis". Because meningitis has so many causes, it cannot be eliminated or eradicated. There will be no "world free" moment for meningitis, but we are committed to get as close as possible. This plan, therefore, aims to defeat meningitis as a public health threat, reducing the number of cases substantially and keeping them down.

Visionary goals by 2030

- ✓ Eliminate bacterial meningitis epidemics⁵
- ✓ Reduce cases of vaccine-preventable bacterial meningitis by 50% and deaths by 70%⁶
- ✓ Reduce disability and improve quality of life after meningitis due to any cause

All United Nations Member States are committed to achieving universal health coverage by 2030 (20). The visionary goals of eliminating epidemics, reducing the number of cases and deaths, and giving priority to caring for those with disability are fully aligned with universal health coverage and have equity as a guiding principle.

4. Kisa nou pral bezwenn konnen?

Eksplike sa ki
menenjit ak kijan
li manifeste.

Montre enpak li
nan Ayiti.

Sansibilize sou
mezi prevansyon
ak opsyon
tretman.

5. Estatistik sou menenjit an Ayiti

Manke done presi
sou ensidans la.



Plizyè ka yo jwenn
nan zòn riral ki mal
trete, yo pa byen
trete done yo tou.

6. Aksè nan swen ak difikilte nan dyagnostik

Gen kèk laboratwa ki pa ka konfime dyagnostik la.

Pri egzamen yo wo (ponksyon lombè, kiltivasyon).



MANKMAN DLO
POTAB AK MEZI
IJYÈN.



TO VAKSINASYON
KI BA.



SÒTI POPILASYON
NAN KÈK ZÒN.

7. Faktè risk espesifik pou Ayiti

8. Konparezon ak lòt peyi

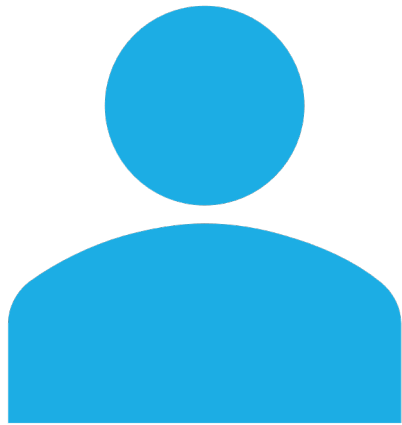
Nan peyi devlope, vaksen yo te redwi ka menenjit yo.



Nan Afrik subsaharan, yo gen epidemi regilye.



Ayiti nan yon sitiyasyon entèmedyè kote gen anpil pwogrè ki dwe fèt.



9. Ka pratik (Similasyon yon ka pratik)

JAN: 8 LANE

9.1 Prezantasyon ka a: Jan, 8 lane

Timoun k ap viv nan zòn riral.

Sentom inisyal yo : lafyè, fatig.

9.2 Premye sentom yo

Jean kòmanse plenyen de tèt fè mal entans.

Li santi dèyè kou li rèd (Raideur de nuque).

9.3 Evolisyon sentom yo

Sansibilite nan limyè.

Vomisman.

Kòmansman konvilsyon (Malkadi nan langaj kouran ayisyen an).

9.4 Reyaksyon paran yo

Paran yo panse se yon grip.

Konsiltasyon an reta nan
lopital la.

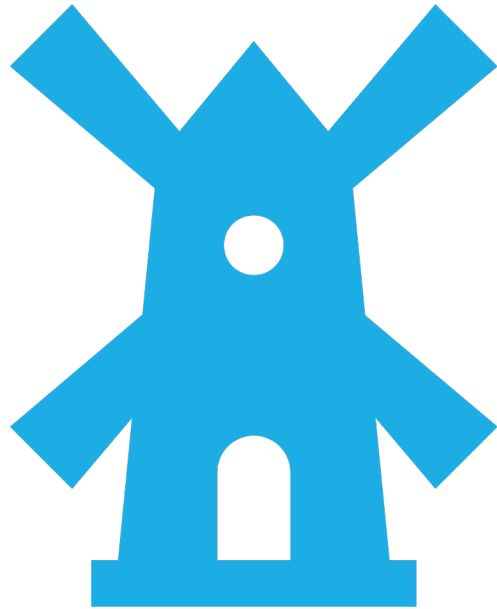
Ponksyon lombè fèt.



Prezans bakteri
nan likid sefalo-
rachidyen (likid yo
rekòlte nan
ponksyon an).

9.5 Dyagnostik konfime

9.5 Evalyasyon (Prise en charge) ak Tretman



- Antibiotik.
- Suivi nan lopital.

9.6 Evolisyon payan an

- **Jan geri men li rete ak kèk konsekan tandè.**
- Enpòtans ale lopital rapid vit!!!.



10. Konprann Menenjit

PWOFESYONÈL AK PATIKILYE (10%)

Principaux faits

La méningite est une maladie dévastatrice, dont le taux de létalité est élevé et qui peut entraîner de graves complications à long terme (séquelles).

- La méningite reste un problème majeur de santé publique à l'échelle mondiale.
- Des épidémies de méningite sévissent dans le monde entier et en particulier en Afrique subsaharienne.
- La méningite peut-être due à de nombreux agents pathogènes, dont des bactéries, des virus, des champignons et des parasites.
- La méningite bactérienne est particulièrement préoccupante. Environ 1 personne sur 10 atteintes de ce type de méningite en meurt et 1 sur 5 présente des complications graves.
- Les vaccins, sûrs et abordables, sont le moyen le plus efficace d'offrir une protection durable.

10.0 Fason OMS prezante menenjit

10.01 Ilstrasyon



10.1 Definisyon aj tip yo

Menenjit viral (ki pi komen, li geri rapid).

Menenjit bakteryèn (ki ka touye si li pa trete rapidman).

Menenjit fonjik (ra, li afekte sitou moun ki gen sistèm iminitè fèb).

Most commonly due to an infectious agent

- GBS, *E Coli*, and *L monocytogenes* (neonates)
- *N meningitidis* (children and teenagers)
- *Strep pneumo* (adults and elderly)
- *H flu* (nonvaccinated infants)
- Coxsackievirus
- Fungi (immunocompromised)

10.2 Sentom pou rekonèt

Tèt fè mal, dèyè
kou rèd (Raideur
de nuque).

Lafyèw wo,
konfizyon.

Vomisman,
konvilsyon
(Malkadi).

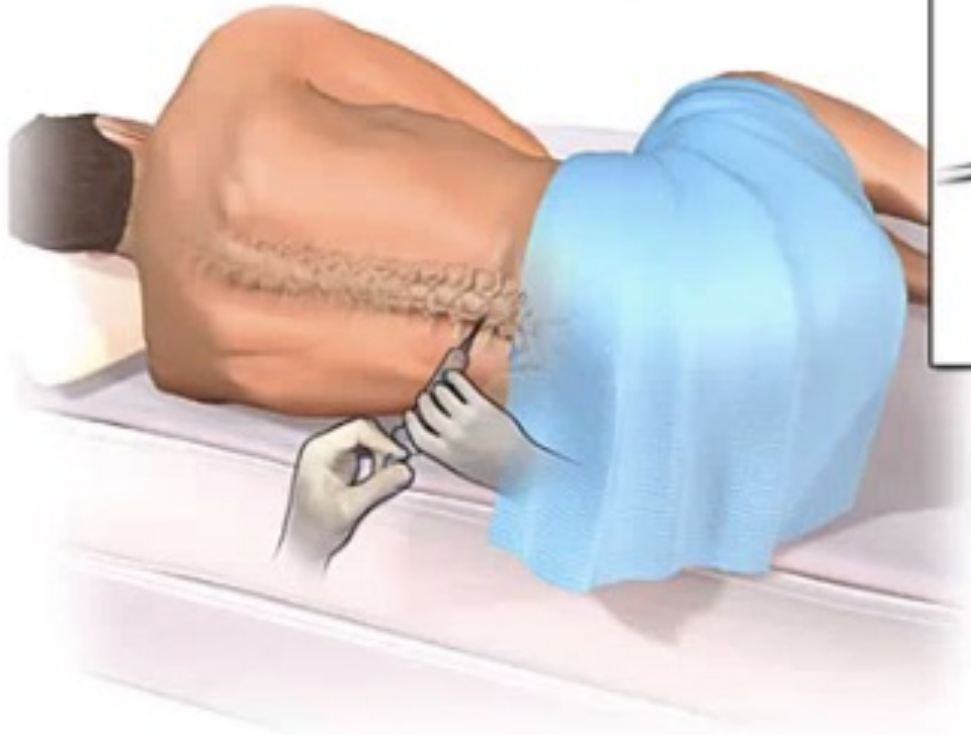
- Headache, neck stiffness, and fever
- Photophobia, vomiting, and altered mental status

Symptoms

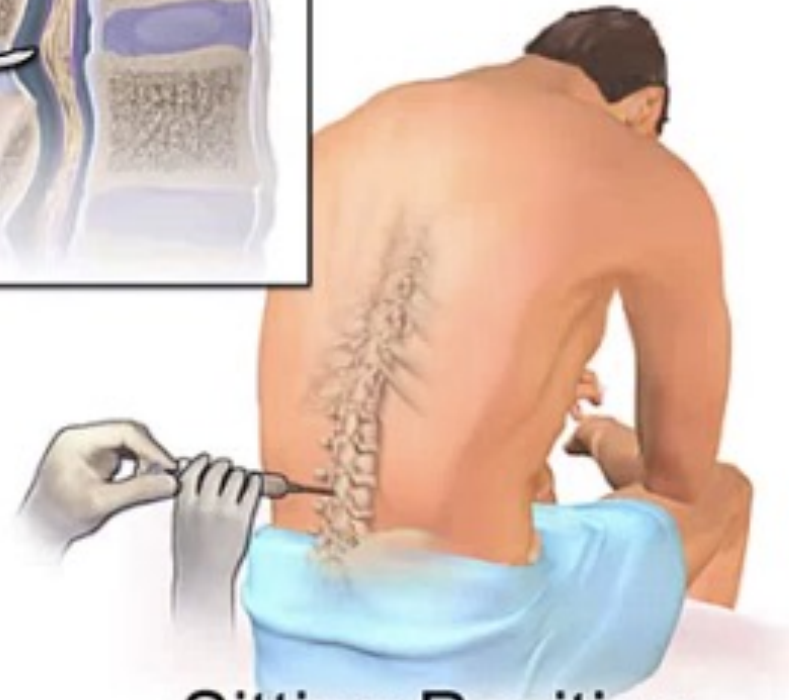
- Kernig sign
 - Thigh bent at hip with knee at 90 degrees
 - Subsequent extension of knee is painful (resistance)
- Brudzinski's sign
 - Lay patient flat
 - Lift head off table
 - Involuntary lifting of legs
- Both signs of meningismus
 - Usually meningitis
 - Also subarachnoid hemorrhage

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Lumbar Puncture



Lying Position



Sitting Position

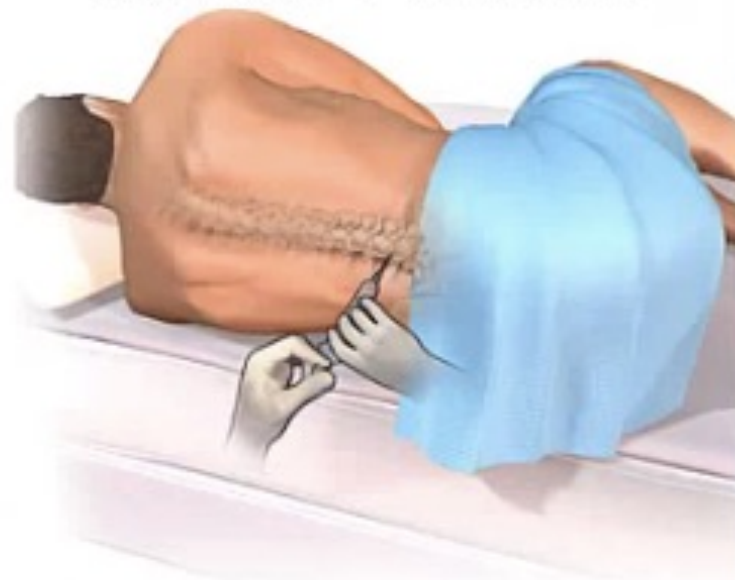
10.3 Diagnostik

Opening Pressure

- Patient must lie on their side
- Normal pressure up to 250mm H₂O
- Elevated pressure (>250):
 - Bacterial
 - Fungal/TB
 - Rarely viral
- Elevated pressure in hydrocephalus
- Therapeutic for ↑ICP

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Lumbar Puncture



Lying Position

Spinal Fluid Testing

- Cells
- Protein
- Glucose
- Culture

Normal CSF

- Clear
- 0-5 lymphocytes
- <45mg/dl protein
- >45mg/dl glucose
- About 2/3 of blood glucose (80-120)

CSF Meningitis Findings

	Cells	Protein	Glucose
Bacterial	↑PMNs	↑	↓
Viral	↑lymphocytes	Normal or ↑	Normal
Fungal/TB	↑lymphocytes	↑	↓

Diagnosed by LP

- Bacterial– neutrophils with low glucose; positive gram stain and culture
- Viral– lymphocytes with normal CSF glucose
- Fungal– lymphocytes with low CSF glucose

10.3 Konplikasyon posib

Pasyan an ka soud
(Surdité).

Defisyans nan sistèm
iminitè.

Kòma, lanmò.

11. Prevansyon ak Solisyon

PWOFESYONÈL AK PATIKILYE (40%)

11.1

Enpòtans vaksen an

Vaksen kont Nemokòk
ak menengokòk.

Enpòtans kanpay
vaksen yo.

H. Influenza Vaccine

- Hib once most common cause bacterial meningitis
- Hib conjugate vaccines given in infancy
- H. Flu meningitis almost always occurs in unimmunized children
 - May immigrate from other countries without vaccination

1 1.2 Mezi ijyèn

Lave men
yo.

Pa pataje
zouti
pèsonèl.

1 1.3 Tretman ak aksè nan swen

Enpòtans
dyagnostik
bonè.

Wòl antibiotik
yo.

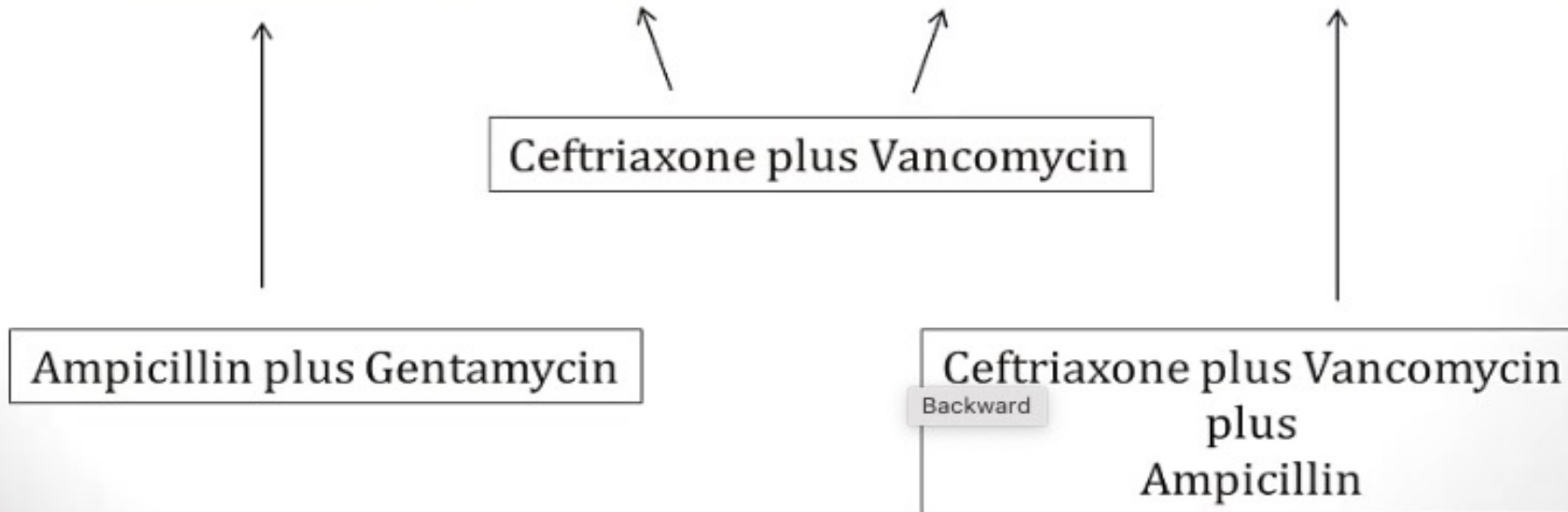
Sant sante kote
pou konsilte
nan Ayiti.

Selecting Treatment

- Antibiotics
- Culture takes days
- Cannot wait for culture to drive choice of drug
- Choose drugs based on:
 - Patient age, co-morbidities
 - Spinal fluid cell types, protein, glucose

Causes of Meningitis

Newborn 0-6months	Children 6mo-6yrs	Young adults 6-60yr	Elderly 60yr+
Group B Strep E. Coli Listeria	S. Pneumo N. Meningitidis H. Flu B Enteroviruses	S. Pneumo N. Meningitidis Enteroviruses HSV	S. Pneumo Gram – rods Listeria



Neisseria Meningitidis

- Gram negative cocci in pairs (diplococci)
- Transmitted by respiratory droplets
- Enters pharynx then bloodstream then CSF
- Many asymptomatic carriers
- Polysaccharide capsule prevents phagocytosis
- Lipooligosaccharide (LOS) outer membrane
 - Like LPS on gram negative rods
 - Endotoxin → many toxic effects on body
 - Activates severe inflammatory response

Streptococcus Pneumoniae

- Most common cause meningitis all ages
- Lancet-shaped, gram positive cocci in pairs
- Can follow strep respiratory infection
- Increased risk
 - Asplenic patients
 - Sickle cell
 - Alcoholics
- Also causes otitis media (kids), pneumonia, sinusitis

H. Influenza Vaccine

- Hib once most common cause bacterial meningitis
- Hib conjugate vaccines given in infancy
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Listeria

- Gram positive rod
- Facultative intracellular organism
- “Tumbling motility”
- Multiplies in cells with poor cell-mediated immunity
 - Neonates, HIV, organ transplant
- In adults, often from contaminated food
 - Undercooked meat, unwashed vegetables
 - Unpasteurized cheese/milk
 - Likes cold temperatures
- In neonates, transplacental or vaginal transmission

Backward

Group B Strep

- Strep Agalactiae
- Gram positive cocci in chains
 - Catalase negative
 - Beta hemolytic bacteria
 - CAMP test positive
- Most common cause meningitis in newborns
 - Transmitted when baby passes through birth canal
 - Ampicillin during labor can prevent
- May not have classic symptoms
 - Hypotonia, weak sucking reflex
 - Bulging fontanel, sunken eyes
 - Poor feeding

E. Coli

- 2nd most common meningitis cause neonates
- Motile, gram-negative bacillus (rod)
- Some strains have K-1 capsular antigen
 - Inhibits complements, other immune responses
 - Allows bacteria to evade host immunity
- Grows on:
 - Blood agar
 - MacConkey agar
 - Eosin methylene blue agar

Encephalitis

- Encephalitis = brain inflammation
- Must make sure meningitis patients don't have:
 - Altered mental status
 - Motor or sensory deficits
 - Altered behavior and personality changes
 - Speech/movement disorders
- If these are present, HSV-1 is common cause

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Viral Meningitis

- Old name: “aseptic”
 - Evidence of meningitis without bacteria
- Usually enteroviruses
 - Coxsackievirus, echovirus, poliovirus
- Self-limited
- Supportive care – no specific treatment
- All single stranded RNA viruses
- Fecal-oral transmission

Viral Meningitis

- Rare causes
 - HSV
 - HIV
 - West Nile virus
 - Varicella Zoster virus

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Viral Meningitis

- Usually no specific virus testing
- If HIV suspected
 - Blood testing for HIV RNA and HIV antibody
- If HSV suspected anti-virals can be given
- Other viruses tested only special circumstances

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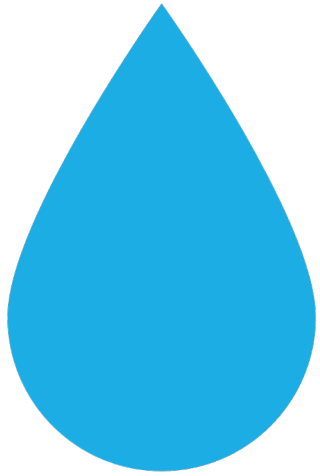
TB Meningitis

- M. tuberculosis infection of the meninges
- CSF lymphocytes
- High protein, low glucose
- Need multiple CSF samples for culture
- Acid-fast bacilli (AFB) sometimes seen in CSF
- Nucleic acid amplification tests (NAATs) used
 - Use polymerase chain reaction (PCR) techniques

1 1.4 Sansibilizasyon kominotè



- Wòl lekòl ak fanmi yo.
- Enpòtans medya yo pou pataje enfòmasyon.



12. Kesyon & Echanj

PATISIPAN (100%)

12.1 Rezime

01

Méningit se yon
maladi grav men ki
ka evite.

02

Dyagnostik ak
tretman rapid yo
esansyèl.

03

Vaksen an rete pi
bon prevansyon
an.

1 2.2 Diskisyon ouvè

Kesyon nan
men piblik la.

Pataje
eksperyans.

1 2.3 Enfòmasyon ak resous



KONTAK LOPITAL AK
KLINIK NAN AYITI.



SIT ENTÈNÈT POU
APRANN PLIS SOU SIJÈ A.

12.4 Konklizyon & Apèl ak aksyon

Ansanm, ann
prevni
menenjit !

Enpòtans
sansibilizasyon
ak vaksen.

13.0 Références

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MERCI!

EDINY DOUYON