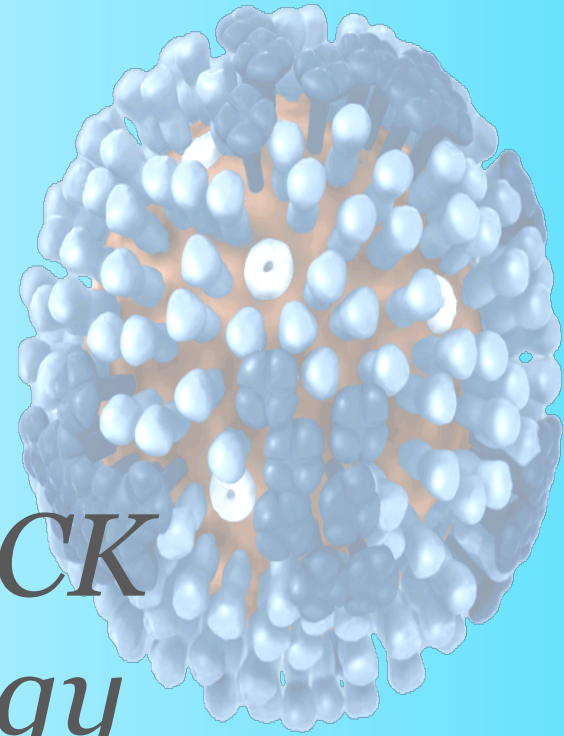


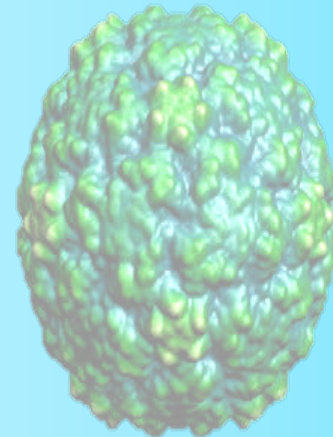


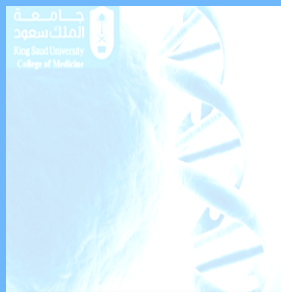
Microbiology Team 434



RESPIRATORY BLOCK

Practical Microbiology





CASE 1

A 5 year boy was brought to King Khalid University hospital, outpatient department complaining of fever and sore throat. He had regular vaccination history. On examination his temperature was 38.5° c, the tonsil area and pharynx were obviously inflamed with some foci of pus.



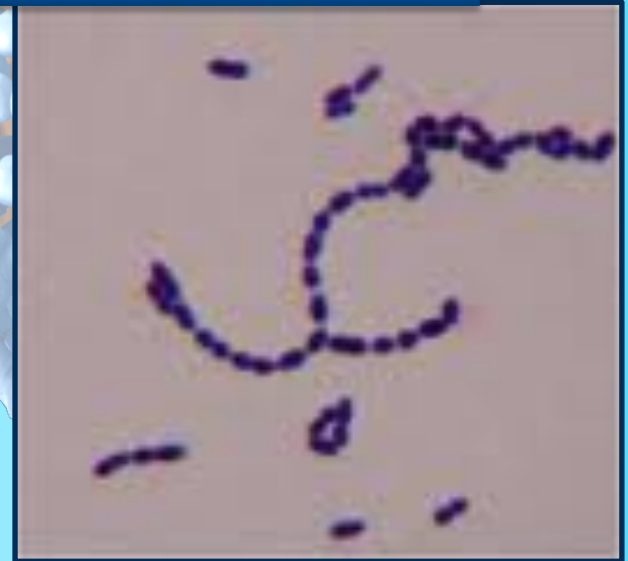
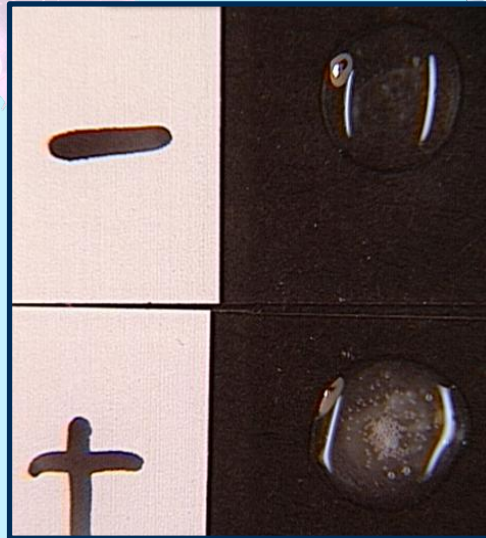
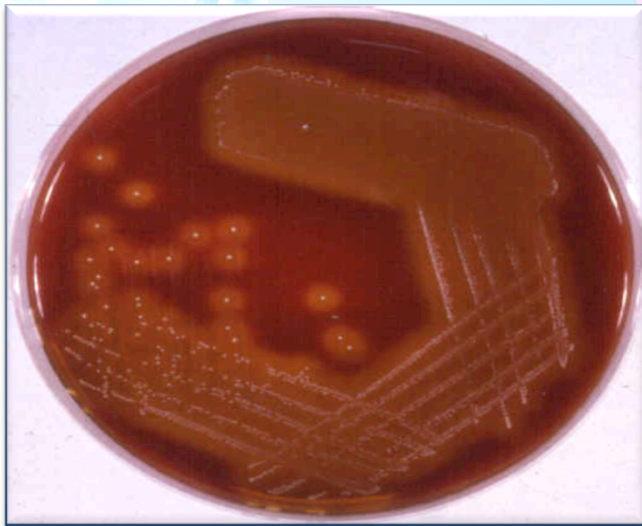
1. What is the differential diagnosis?

Group A streptococcus or Viral infection.

2. What investigation should be done?

Throat swab

- The full blood count showed a total white cell count of 15000/ml. Throat swab culture showed colonies with clear haemolysis on blood agar. They were catalase negative. The gram stain of these colonies showed gram positive cocci in chains



1. What is the likely identity of the organism?

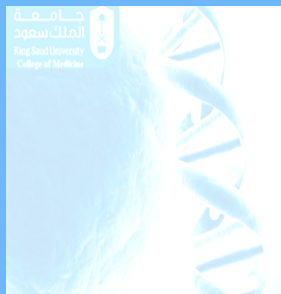
Group A streptococcus

2. What is the best antibiotic therapy for this child?

Penicillin , if the patient allergic to it we use erythromycin

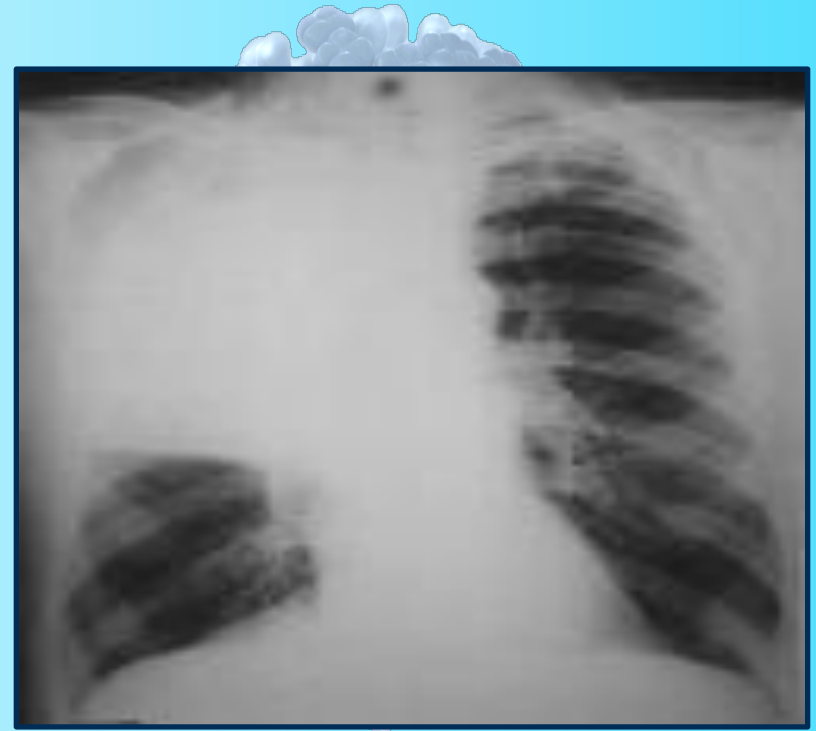
3. If not treated what complication may this child have after 6 weeks period?

Rheumatic fever



CASE 2

A 28 Year Old Female presented to the accident and emergency of KKUH with a sudden onset of fever, right sided chest pain and productive cough of purulent sputum. On examination her temperature was 39 °C. There were Rhonci and dullness on the right side of the chest. X-ray showed massive consolidation on the right side of the chest.



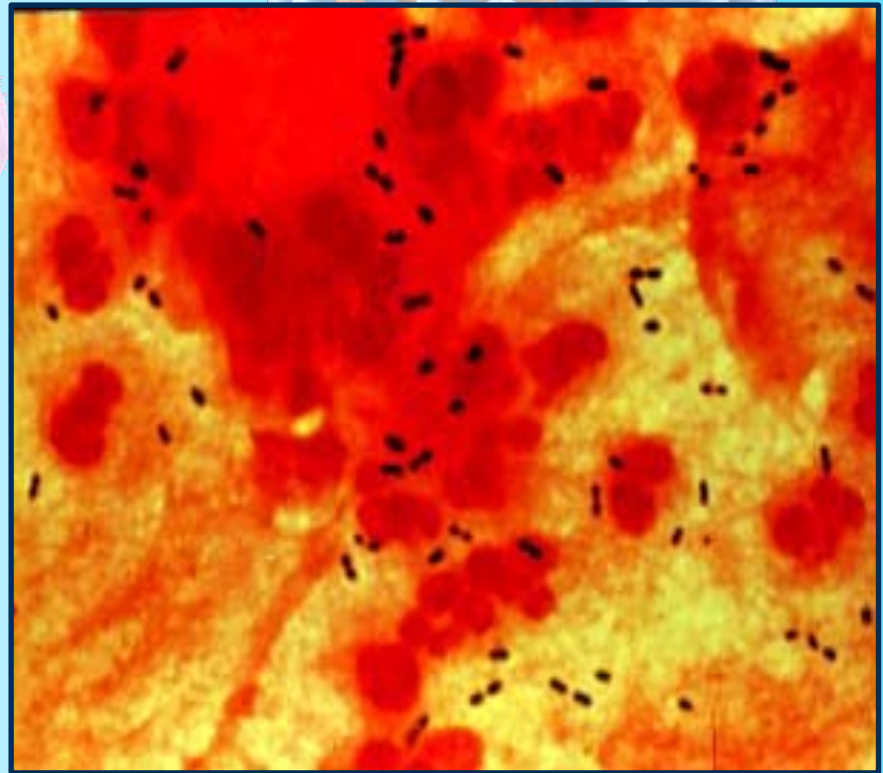
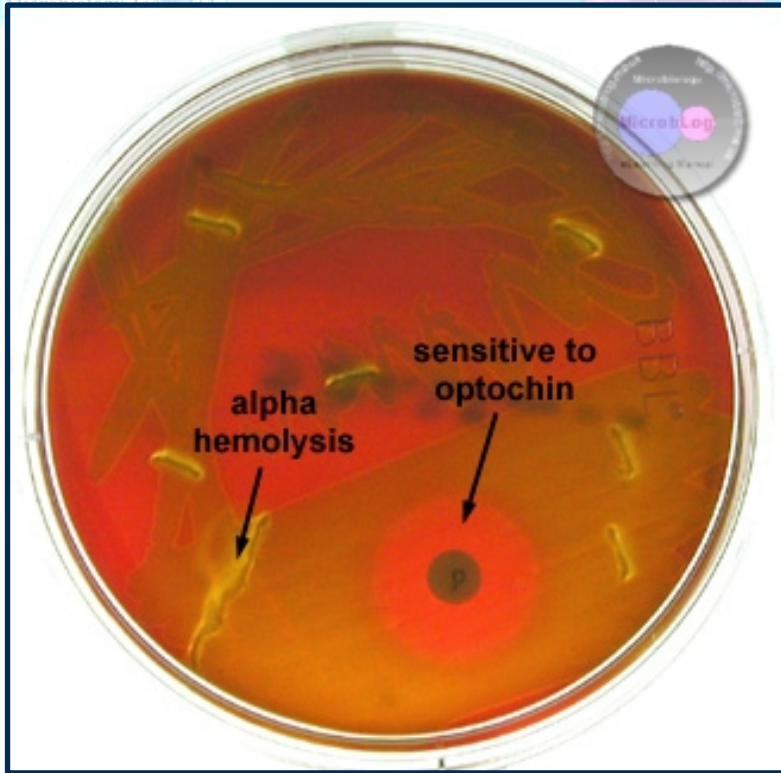
1. What is the most likely diagnosis?

lobar pneumonia

2. What investigation should be done?

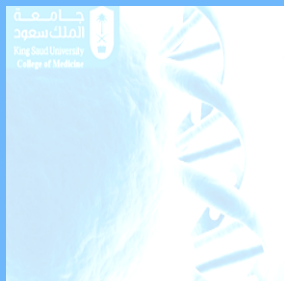
Sputum Culture and Blood Culture

The blood counts showed a total white cell count 45,000/ ml 90% of the cells were neutrophils. The sputum culture showed alpha haemolytic colonies on blood agar. The gram stain showed gram positive diplococci which were catalase negative. This organism was confirmed to be optochin susceptible.



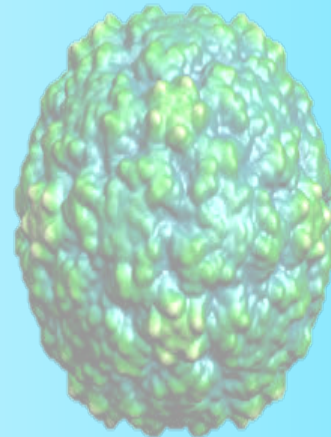
What should have been the empirical therapy for this case and why?

Penicillin



CASE 3

Abdul Karim is a 45 year old Saudi man who was admitted to King Khalid University Hospital because of 2-3 month history of loss of appetite, weight loss, and on and off fever with attacks of cough. Two days before admission .he coughed blood (haemoptysis) Abdul karim is diabetic for the last 5 years. His father died of tuberculosis at the age of 45 yrs.



- On examination Abdul Karim looked weak with a temperature 38.6 °C, CVS and Respiratory system examination was unremarkable.
- The chest X-ray done showed multiple opacities and cavities
- The ESR was increased (85 m/hour)



Figure 8. Chest x-ray with bilateral upper lobe opacities (white areas) with multiple cavities including a very large cavity in the right upper lobe (arrows).

What further tests should be done?

- 1- Sputum Microscopy: Ziehl-Neelsen stain (shows Acid Fast Bacilli)
- 2- Culture: Growth on L.J medium(selective for mycobacteria)

What is the probable diagnosis?

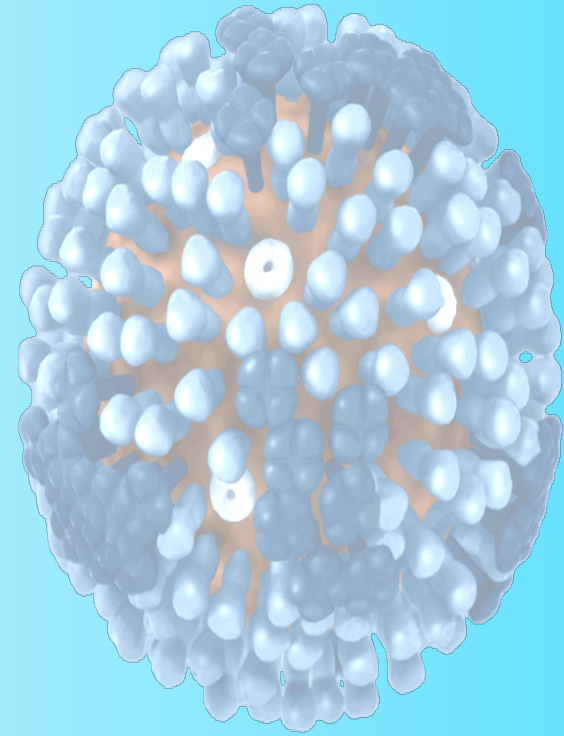
Pulmonary tuberculosis

How can the diagnosis be confirmed?

By TB culture(L.J medium)



Microbiology Team 434



Good Luck

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